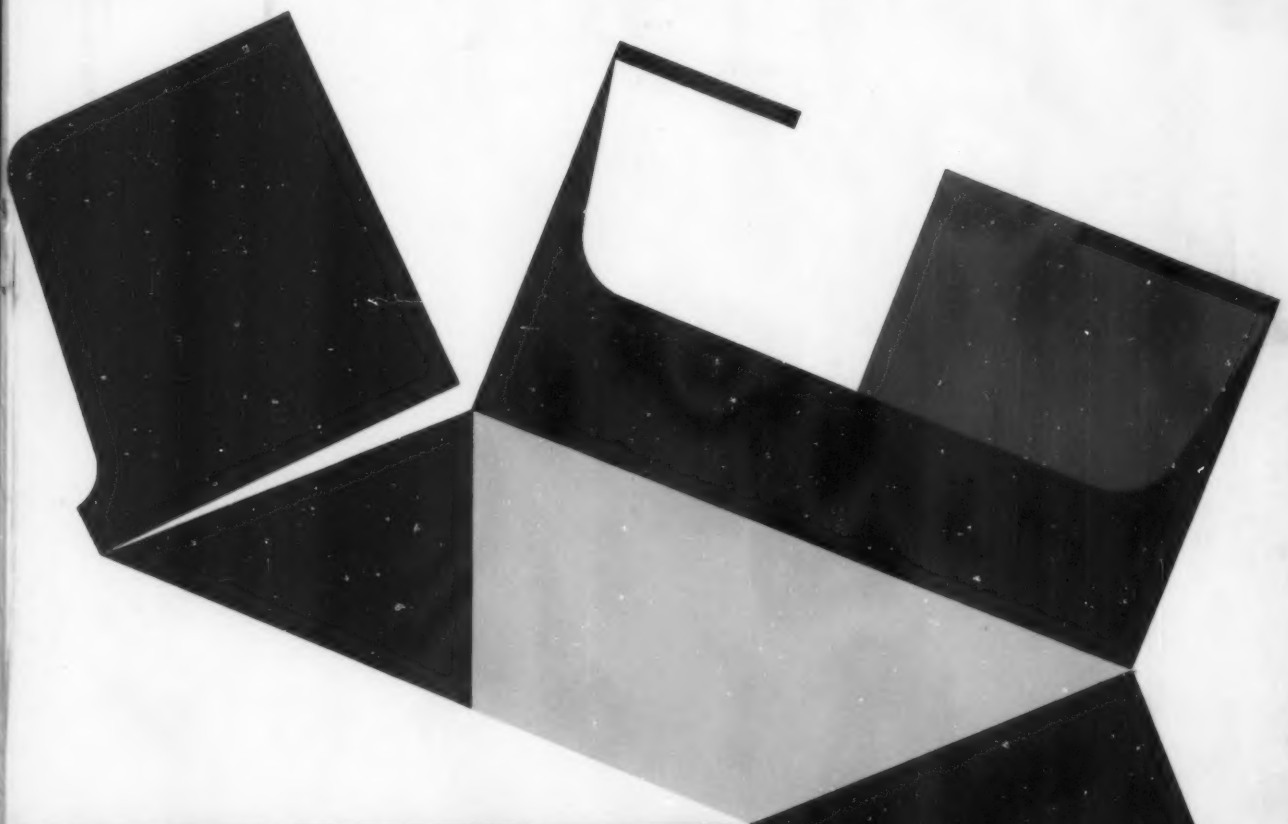
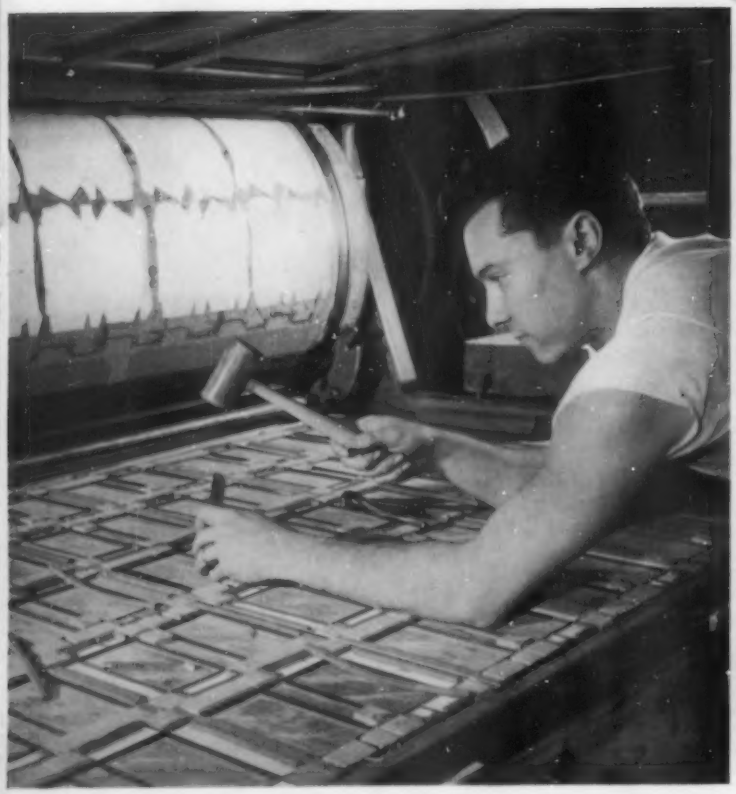
# MODERN PACKAGING





**APRIL 1957**

*The folding-box industry supplies the most widely used package—115 billion in '56*

**COMPLETE CONTENTS p. 2**

## makes every shipping case a better salesman

LAP-LOK, National's resin corner-lap glue, makes cases more attractive. Smoother. Neater. Frees the entire case surface for sales messages.

Safer too. LAP-LOK strengthens the case. Allows no fractional-inch-give to cause breakage. No jagged metal ends scuff labels or tear contents. Shipping—and handling—are easier for everyone.

LAP-LOK withstands heat, cold, moisture. As proven by over three years' usage in the field. Dries to a clear transparent film. Leaves no unsightly squeeze-out. Odorless. Write for data and sample.

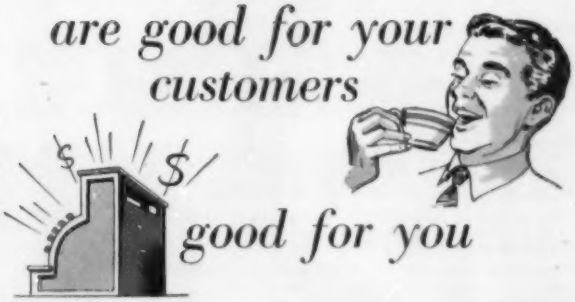
RESYNS® National ADHESIVES

NATIONAL STARCH PRODUCTS INC.

270 Madison Avenue, New York 16 • 3641 So. Washtenaw Avenue, Chicago 32 • 735 Battery Street, San Francisco 11

# Continental's NEW Savorlock Cans for instant coffee

*are good for your customers*



*good for you*

Your customers will go for instant coffee in Savorlock cans, because a Savorlock gives extra flavor protection — not only in the store, but in the home. After the tamper-proof glassine seal is broken, the lock top provides a positive reseal in day-to-day use.

Savorlock cans are designed to make your life more pleasant, too. Special construction permits fast filling, secure stacking and maximum display on store shelves. In addition, Savorlock cans give you colorful, top-to-bottom lithography by Continental craftsmen.

Available in 2- and 6-oz. sizes, Savorlock cans are already a commercial success. Let them start selling for you. Call Continental for fast delivery.

**CONTINENTAL CAN COMPANY**

QUALITY Continental SERVICE

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4

MODERN PACKAGING®

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# From Tube Filler to Completed Package— Fully AUTOMATIC CARTONING with a REDINGTON!

With just *one girl* to supervise, a REDINGTON Type 23 handles the entire assignment of cartoning the regular 1¾ oz. tube of VO5, illustrated—*automatically*. And besides delivering a steady stream of perfectly cartoned units, hour in and hour out, this REDINGTON gives Alberto-Culver Co. of Hollywood, Chicago, Illinois, flexibility of adjustment to handle other sizes, including the double-tube pack also shown. With the REDINGTON hooked directly to the tube filler (both machines are timed to work off the REDINGTON drive), packaging line efficiency is high, labor costs are low.

For 6 decades, REDINGTON machines have been doing equally useful, cost-saving jobs for packagers both large and small in almost every field, throughout the world. Engineered and built to give superior performance—to reduce maintenance to a minimum—to last for years of productive life, the right REDINGTON might do much for *your* packaging, too.

Call us in now to talk it over—and send for the current edition of our 44-page illustrated catalog.

**REDINGTON**

**AUTOMATIC MACHINES for CARTONING**
**WRAPPING • SPECIAL PACKAGING**

## F. B. REDINGTON CO.,

**3010 ST. CHARLES ROAD, BELLWOOD, ILLINOIS**
**Chicago Phone: AUstin 7-4200... *Verona, New Jersey: CEnter 9-4608***

**THIS REDINGTON *Type 23* handles the double-tube pack with ease. Each pocket of the article conveyor picks up a regular tube from the filler discharge chute. A flat-stacked circular is automatically fed, folded and placed over the cap and down the sides of the tube. Two extra girls place sample tubes in slotted cards, then place tube and card into a special subdivision which has been added to the conveyor pocket. The machine then feeds and opens a partitioned carton, inserts the entire pocket contents with continuous loading action, and tucks in the end flaps to finish the package, which it discharges to the packing table.**

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MODERN PACKAGING®

# It's a great year

Who said this would be a recession year? And why? Was 1956 really too good to last?

The latter theory, a favorite of the boom-and-bust boys, seems to have been the only real reason for the trepidation with which business generally entered 1957. There may have been a few political angles, too. But it seems, from the point of retrospect, that far too much significance was attached at year-end to certain balancing factors that were really as normal as blueberry pie.

Certainly no one can deny at this point that in dollar volume 1957 is heading for a higher level even than record-breaking 1956. The latest estimate is that Gross National Product in 1957 will reach $435 billion, as against $412 billion last year.

The head shaking a few months ago emanated largely from Wall Street, where investors were understandably troubled by the procession of headlines on corporate reports: "Record Sales; Profits Lower." But isn't it normal for profits to be shaved at some point when prodigious production at high-cost levels out-paces prodigious demand?

A second factor that seems to have been warped in the economic thinking is the hurry-up, slow-up cycle of buying that always accompanies a concerted upward price movement—itself a necessary reaction to falling profits. It was perfectly apparent in the third quarter of last year that packaging buyers were filling their bins against the warning of price rises in paperboard boxes, metals, glass, etc. That's normal.

Should it have been a shocking discovery that an inflated third quarter of package purchasing had to be balanced by a deflated fourth quarter? If manufacturers, already up to here in paper boxes, had to cut back purchases of paper boxes in December, should that have been interpreted as meaning that business was going to pot?

Fortunately, our economy is too strong to be frightened by its own shadow.

The latest survey of the National Assn. of Purchasing Agents concludes that buying is back on balance. Buyers generally have ceased increasing inventories and are purchasing reasonably at a rate to keep production flowing —a sure sign that the adjustment has run its course. Eighty-two percent report production in February equalling or exceeding that of January, 77% find new orders steady or higher. And as to the future, two out of three buyers expect continued business at levels comparable to 1956; only one out of four looks for any decline. Employment remains steady.

It's going to be a great year, and perhaps a superlative year, for everyone connected with packaging.

*The Editors*

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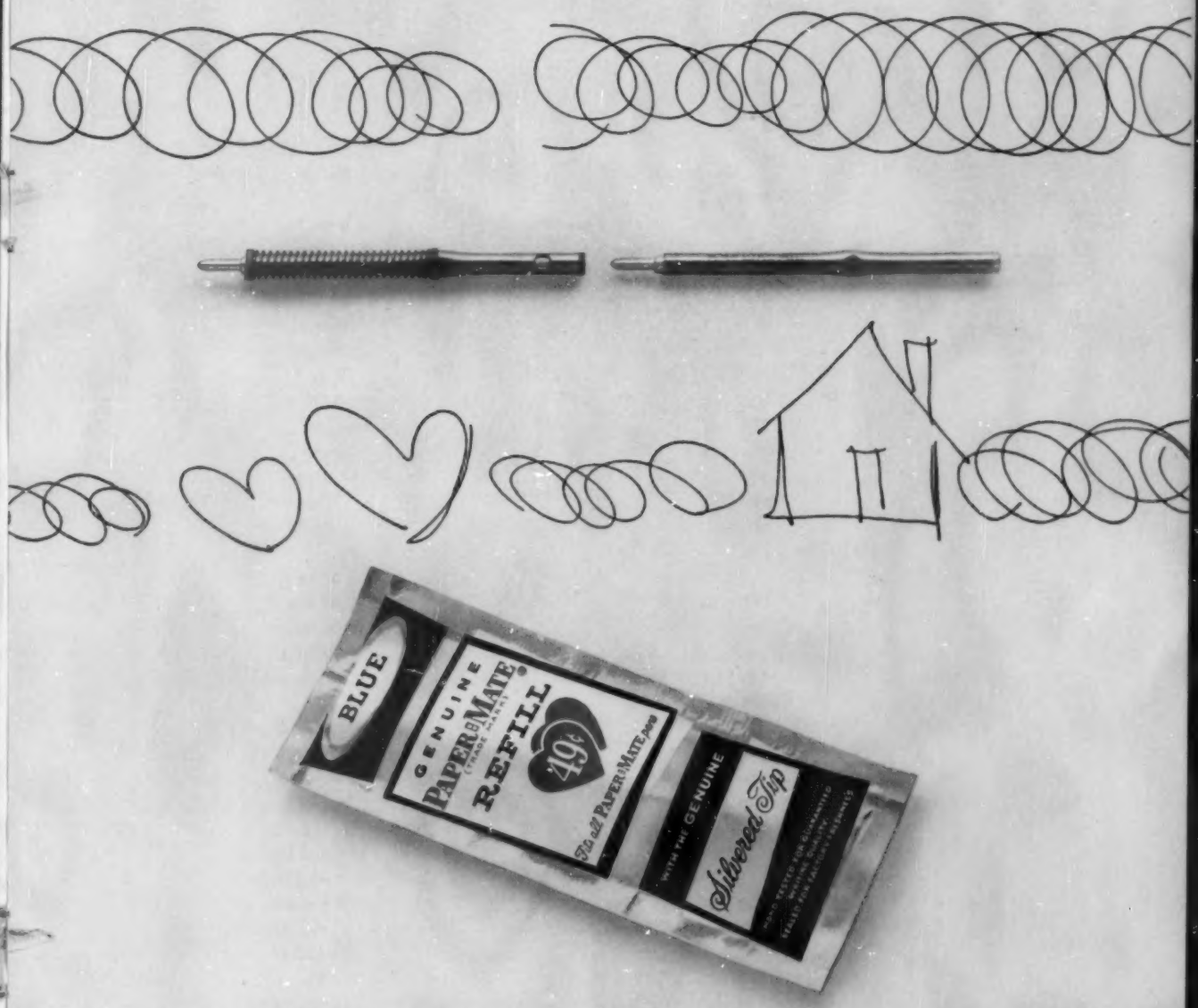
# iDea at work...




## Dobeckmun Metalam® writes up faster sales for Paper-Mate.

For any product where protection, convenience and easy-to-read directions add up to sales appeal, a colorful package like this can make a tremendous difference. Firm and strong, yet easy to open, printed Dobeckmun Metalam solves many a selling problem, and probably yours. Get in touch with your nearest Dobeckmun representative or write Dobeckmun direct.

**Dobeckmun Company, Cleveland 1, Ohio • Berkeley 10, California**

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Los Angeles • Memphis • Milwaukee • New Orleans • New York • Omaha • Philadelphia • Phoenix • Pittsburgh • Portland • Richmond
Rochester • Salt Lake City • San Antonio • Seattle • St. Louis • St. Paul • Syracuse • Tampa • Yakima • Havana • London • Amsterdam

## A man's bottle for a man's product

This broad-shouldered, masculine bottle is a natural for a man's hair tonic.

Besides looking the part, its design is modern, functional, and easy to identify. It's short . . . to fit readily in travel kits and medicine cabinets, and the raised letters on the sides give a sure grip for the slipperiest hands. For all these reasons, this Armstrong-designed bottle and cap were chosen to replace a package backed by 24 years of brand identity. Armstrong Cork Co., Lancaster, Penna.

Armstrong PACKAGING

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER TUESDAY EVENING ON NBC-TV

# GER-PAK®
## POLYETHYLENE
# FILM

**SHEETING AND TUBING FOR PROTECTIVE PACKAGING AND DISPLAY PURPOSES**

### READILY PRINTABLE

Ger-Pak is ideal for packaging anything from clothing to groceries for protection and display purposes.

Ger-Pak's specially treated, printable, non-ruboff surface is non-toxic, heat sealable and stable to temperature and humidity changes.

### CUT COSTS WITH GER-PAK DRUM AND CARTON LINERS

Use light-weight drums and cartons with Ger-Pak liners to seal out moisture, dirt, contamination—and cut costs as well. This tough, chemically inert film guarantees product protection—speeds return of shipping containers.

Ger-Pak Lay-flat Tubing is produced in a range of thicknesses, lengths and widths to complement your requirements. We welcome your inquiries.

*Service • Quality • Dependability*

**POLYETHYLENE FILM**

**GERING** PRODUCTS, INC.
KENILWORTH, N. J.

*Pioneers in modern plastics for over 30 years!*

# pushbutton hot cocoa . . .

UNIQUE NEW VENDING MACHINE DISPENSES LITTLE PACKETS OF NESTLE'S HOT COCOA. STANDARD FOUNTAIN SUPPLIES HOT WATER. FRESHNESS AND FLAVOR ARE ASSURED BY RIEGEL'S PRINTED POUCHPAK®. ®TM.

Protecting the sales-winning qualities of fine products is only one of the many functions of Riegel papers. Saving money is important, too. Riegel does it for you by creating the right combination of the most efficient packaging materials . . . and by "tailor-making" the paper to run and seal at high speeds on your machines. Tell us what you want paper to do for you. Riegel Paper Corporation, P.O. Box 170, Grand Central Sta., New York 17, N. Y.

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GLASSINES AND GREASEPROOFS
Plain • Waxed • Printed
Lacquer-Coated • Laminated

# YOUR PRODUCT

Combine keen and personal interest in your product and operation with experienced know how and you come up with NATIONAL CAN . . . the perfect combination for efficient packaging. Why not let us survey your needs — you'll see how much more you get from NATIONAL CAN.

*the perfect combination*

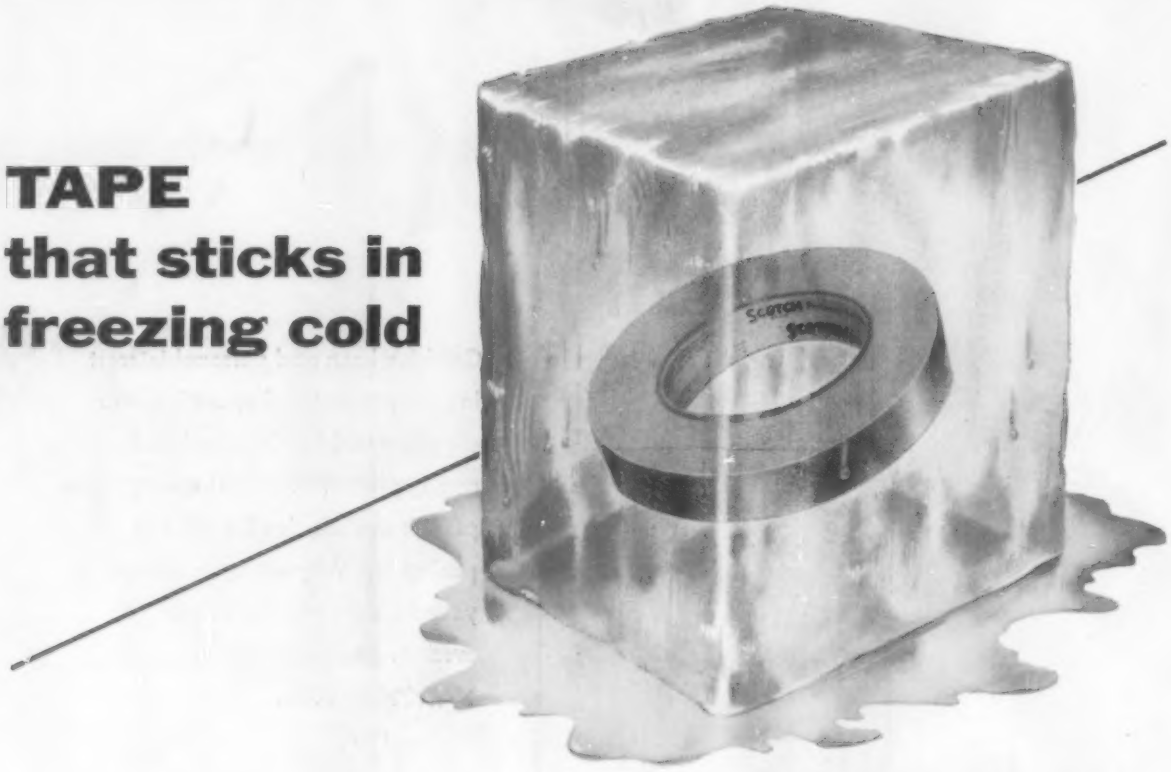
# OUR PRODUCT

PRODUCT RESEARCH | ENGINEERING | RESEARCH DEVELOPMENT | SALES SERVICE | DESIGN | CLOSING MACHINERY | LITHOGRAPHY

## NATIONAL CAN CORPORATION

CHICAGO • NEW YORK • SAN FRANCISCO . . . PLANTS FROM COAST TO COAST

# TAPE that sticks in freezing cold




Tough, moisture-resistant "SCOTCH" Brand Acetate Fibre Tape sticks at a touch to metal, plastic, wood, glass . . . even at below-freezing temperatures. Long-aging and dimensionally stable, too. Available in 12 eye-catching colors for coding or identifying; can be printed on if desired. Meets Government Specification JAN-P-127. Ask your regular distributor for "SCOTCH" Brand Acetate Fibre Tape, or write us for further information.

**ACETATE FIBRE TAPE**

*. . . one of more than*

**300 Pressure-Sensitive Tapes**

*for industry, trademarked . . .*

REG. U. S. PAT. OFF.

**SCOTCH**
**BRAND**

## Look what you can do with it!

**SEAL** cartons against moisture. "SCOTCH" Brand Acetate Fibre Tape holds securely; transmits less moisture than carton itself.

**HOLD** bags and packages closed at below-freezing temperatures. Even changes from cold to warm or hot won't unstick this tape.

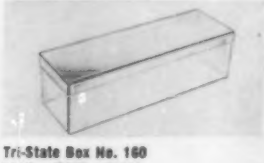
**LABEL** products or containers at production-line speeds with *printed* "SCOTCH" Acetate Fibre Tape and automatic Applicator.

**FREE FOLDER** on money-saving advantages of "SCOTCH" Brand Acetate Fibre Tape. Write on your letterhead to Dept. EA-47.

*The term "SCOTCH" is a registered trademark of Minnesota Mining and Manufacturing Company, St. Paul 6, Minn. Export Sales Office: 99 Park Ave., New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.* © *3M Co. 1957.*

PRODUCT OF 3M COMPANY RESEARCH

# sells safety... glamorously!



**Tri-State Box No. 160**
2¼" x 8¾" x 2¾"
From the world's largest assortment of stock sizes and shapes, or let us mold large quantities to your specifications.

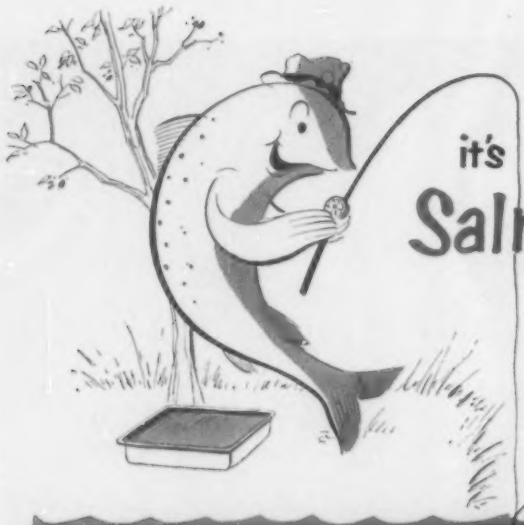
Putting color and fashion into a safety device... and then packaging it in Tri-State rigid plastic showcases... is responsible for the remarkable success of the SPI Safety Belt, made by Stephen Products, Inc. of Illinois. In one short year the SPI belt package has actually nosed other brands off the counter because, inside and out, it is a package with tremendous customer appeal. The handsomely woven belt, the fashion colors (10 of them), the jewelry-like gold-anodized buckle can be seen at a glance. So can the endless uses for the attractive bonus box. Crystal-clear rigid plastic conveys the strongest sales message: this is really superior merchandise, when the manufacturer is proud to put it on view.

There's a Tri-State rigid plastic box to fit your product, build your sales, cut down on your packaging operations. Package in rigid plastic for added protection, greater point-of-sales appeal, for bonus utility boxes.

**TRI-STATE PLASTIC MOLDING CO INC.**

HENDERSON 6, KENTUCKY

CHICAGO: 209 South State St., HArrison 7-3630



it's news when

# Salmon Catch People!

**Vita Brand Salmon now *catch more people* with Reynolds Aluminum Single Seal Can ... new development in**

## REYNOLDS ALUMINUM WRAP PACKAGING

QUALITY PROTECTED WITH REYNOLDS WRAP ALUMINUM PACKAGING

**This Seal says: "DELIVERED FRESH"!**

That's what this Seal means to women, on products they buy: "Delivered Fresh"! Kept fresh by Reynolds Wrap Aluminum Packaging...just as Reynolds Wrap, their favorite foil, keeps leftovers fresh at home. Powerfully promoted by full-page, full-color national magazine ads...network TV... indoor and outdoor spectaculars.

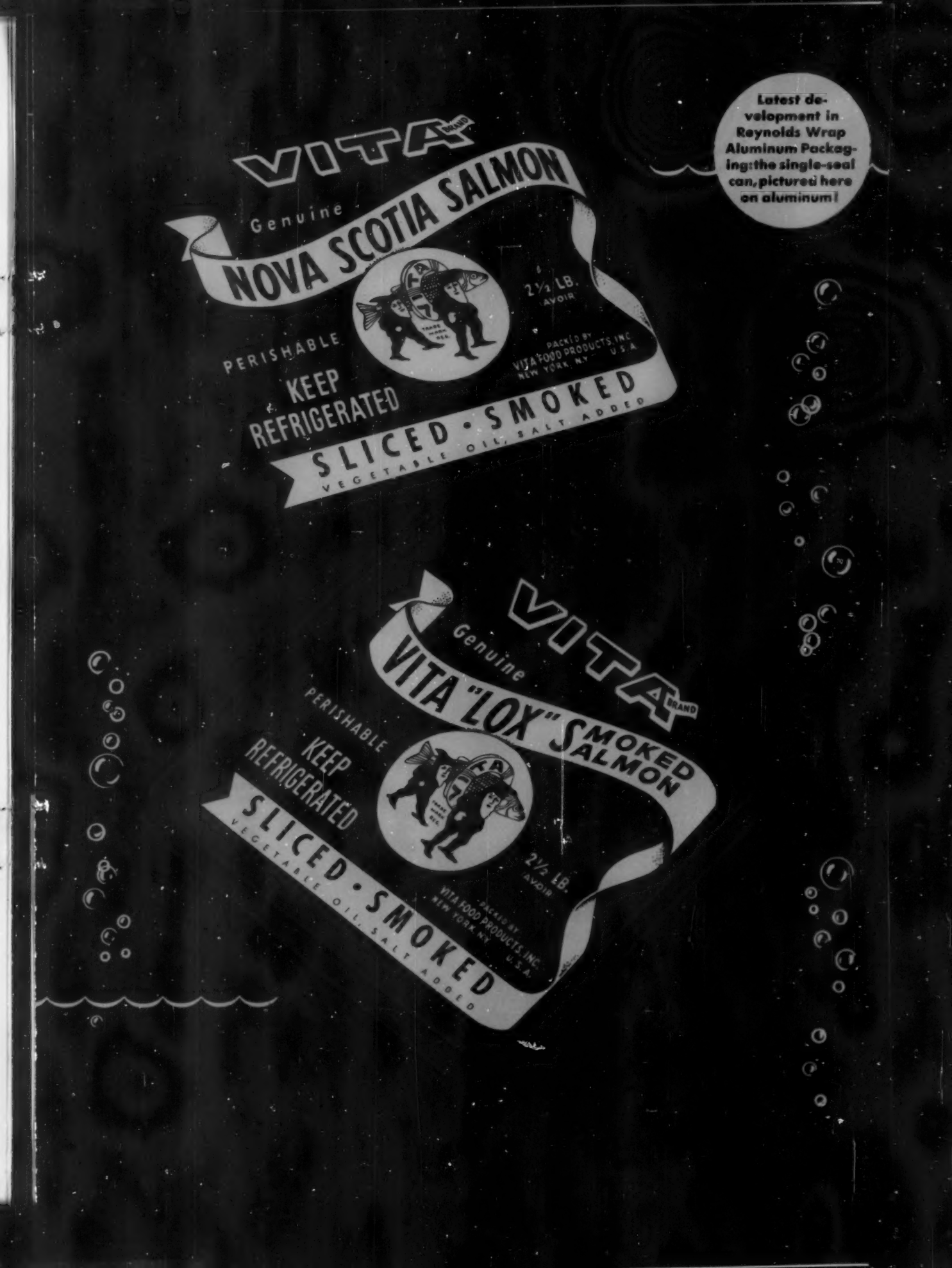
By looks alone—by rich color and handsome design—these new packages would catch more customers for Vita Brand "Lox" and Nova Scotia Salmon. But they have more than looks!

The new Reynolds Aluminum Single Seal Can has a single seam that *seals hermetically*—maximum protection against leaks or spoilage. It saves 15% on shipping weight. Its square shape stacks better, requires less space. By its greater surface area, together with aluminum's high conductivity, this container keeps refrigerated products up to 10° colder in the cabinet. It also freezes foods faster, and permits cooked foods to be heated right in the can.

Surface areas also provide unusual scope for label design and selling message. Ask about colors and sizes. For information on all forms of Reynolds Wrap Aluminum Packaging—and the Seal that identifies it—call the nearest Reynolds Sales Office. Or write to **Reynolds Metals Company**, Louisville 1, Ky.

# REYNOLDS ALUMINUM

See "Circus Boy", Sundays, NBC-TV Network.


Latest development in Reynolds Wrap Aluminum Packaging: the single-seal can, pictured here on aluminum!
VITA BRAND
Genuine
NOVA SCOTIA SALMON
PERISHABLE
KEEP REFRIGERATED
2½ LB. AVOIR
PACKED BY VITA FOOD PRODUCTS, INC. NEW YORK, N.Y. U.S.A.
SLICED • SMOKED
VEGETABLE OIL, SALT ADDED
VITA BRAND
Genuine
VITA "LOX" SMOKED SALMON
PERISHABLE
KEEP REFRIGERATED
2½ LB. AVOIR
PACKED BY VITA FOOD PRODUCTS, INC. NEW YORK, N.Y. U.S.A.
SLICED • SMOKED
VEGETABLE OIL, SALT ADDED

# Gibbs AUTOMATION

## is your next move* in Rigid Plastic

The half-gallon and 16 oz. containers you see here are Gibbs versions of two popular containers used by the food and dairy industries. Precision molded of hi-impact polystyrene, these rigid plastic packages are virtually unbreakable. They won't warp in deep freeze or scalding dishwater. No floppy sides to squeeze or spill... *engineered* for liquids, soft solids, ice cream, peanuts or pickles. Snug lids keep the products fresh and free from contamination.

Complete automation by Gibbs makes possible *faster production* of these better boxes . . . *at lower cost*. Makes it possible for every product to enjoy the self-service features of this superior rigid plastic packaging.

**Get the Gibbs quote on these illustrated containers. Or ask our packaging designers to design the right rigid plastic box for your product . . . within your packaging budget.*

Automation Makes Gibbs Rigid Plastic Boxes Costs Less

For quick service, quality boxes, low quotes, call or write:

**GIBBS AUTOMATIC MOULDING CORPORATION**

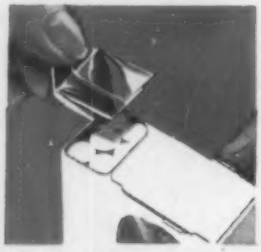
Henderson 3, Kentucky • Telephone: Henderson 9573

*Announcing... to the Cigarette Industry*

# THE ULTIMATE IN HARD-BOX PACKAGING

*Not just another hinged-lid box...but a crushproof CIGARETTE CASE that can be made on your 3-79 AMF Standard Packers!**

1 Hold Twin-Tabs between thumb and index finger to slide panel open.



2 Pull off foil... and your cigarettes instantly appear.

3 "Tap the top" and cigarettes will actually rise from the case!

## "SLIDE-TOP" CASE PACKAGING ADVANTAGES TO THE INDUSTRY

### *Production Advantages*

- Revolutionary one-piece, compact blank design simplifies and speeds production.
- No obsolescence of your present packaging equipment . . . made entirely on 3-79 AMF Standard Packers using a simplified hard-box-blank feed attachment.
- Standard 7-6-7 cigarette packaging is maintained, assuring delivery of 20 perfectly round cigarettes.
- Cellophane opening-tape position unchanged . . . protective cellophane jacket remains on the case.
- No printing registration problems. All six sides of package are unbroken surfaces.

### *Construction Advantages*

- Unique case-design of single-thickness paperboard provides greater built-in rigidity than hinged-lid boxes, whose design requires paperboard inner liners.
- Protective foil inner wrapper is 4-way-interlocked to the case.
- Five times greater moisture-loss protection during use . . . only 1 square inch of foil, instead of 5, removed on opening.
- Corner opening feature assures neater, dispenser-type delivery from the first to the last cigarette.
- The only hard-box design that can be produced either from white sulphate or *white-coated newsback stock!*

### *Advertising Advantages*

- Completely crushproof . . . opened or closed . . . full or empty!
- Positive top closure, plus completely sealed corners, prevents sifting of tobacco particles into pocket or purse.
- Provides package-top brand name visibility at all times.
- Movable slide-panel provides an eye-arresting area for specific feature copy (filter tip, cork tip, mentholated, etc.).
- Offers unlimited TV close-up demonstration possibilities of the pack "in action"—a feature that will spur millions of smokers to try your brand.

## "SLIDE-TOP" CASE PACKAGING ADVANTAGES TO THE SMOKER

- Easiest to open, easiest to close.
- New dispenser-type, crushproof cigarette case adds to smoking pleasure.
- "Slide-Top" closure, plus all corners sealed, prevents sifting of tobacco particles into pocket or purse.
- "Slide-Top" corner opening introduces no habit conflict from long-accustomed corner-opening of the soft pouch pack.
- The easy slide-open-and-slide-closed panel provides a new and pleasant pack manipulation experience.
- The unique case design offers crushproof protection . . . opened or closed, full or empty.
- The slimmer, trimmer cigarette case design will appeal to the esthetic sense of every smoker.

**"SLIDE-TOP" changes your pack completely...without changing it at all!**

*"SLIDE-TOP" Case License Information:*

**PULL-PACKAGING INTERNATIONAL, INC.,** 1724 W. Indiana Avenue, Philadelphia 32, Pa.

●

*Blank Production Information:*

**CONTAINER CORPORATION OF AMERICA**
Chicago, Illinois

**UNITED STATES PRINTING & LITHOGRAPH CO.**
575 Madison Avenue, New York 22, N.Y.

Others to be announced

●

*Packer Conversion Information*

**AMERICAN MACHINE & FOUNDRY CO.**
261 Madison Avenue, New York 16, N.Y.

Demonstrations by appointment

# THE "SLIDE-TOP" CASE

## MAJOR CASE PACKAGING ADVANTAGES

- **No Packaging Equipment Obsolescence**

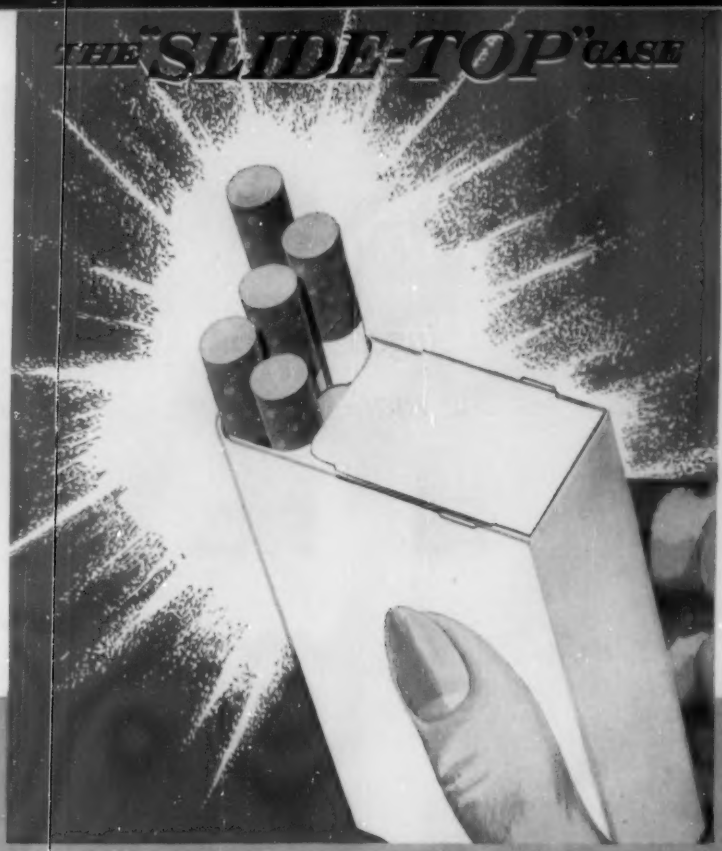
  Industry's present 3-79 AMF Standard Packers readily convertible to case packaging.

- **More Economical**

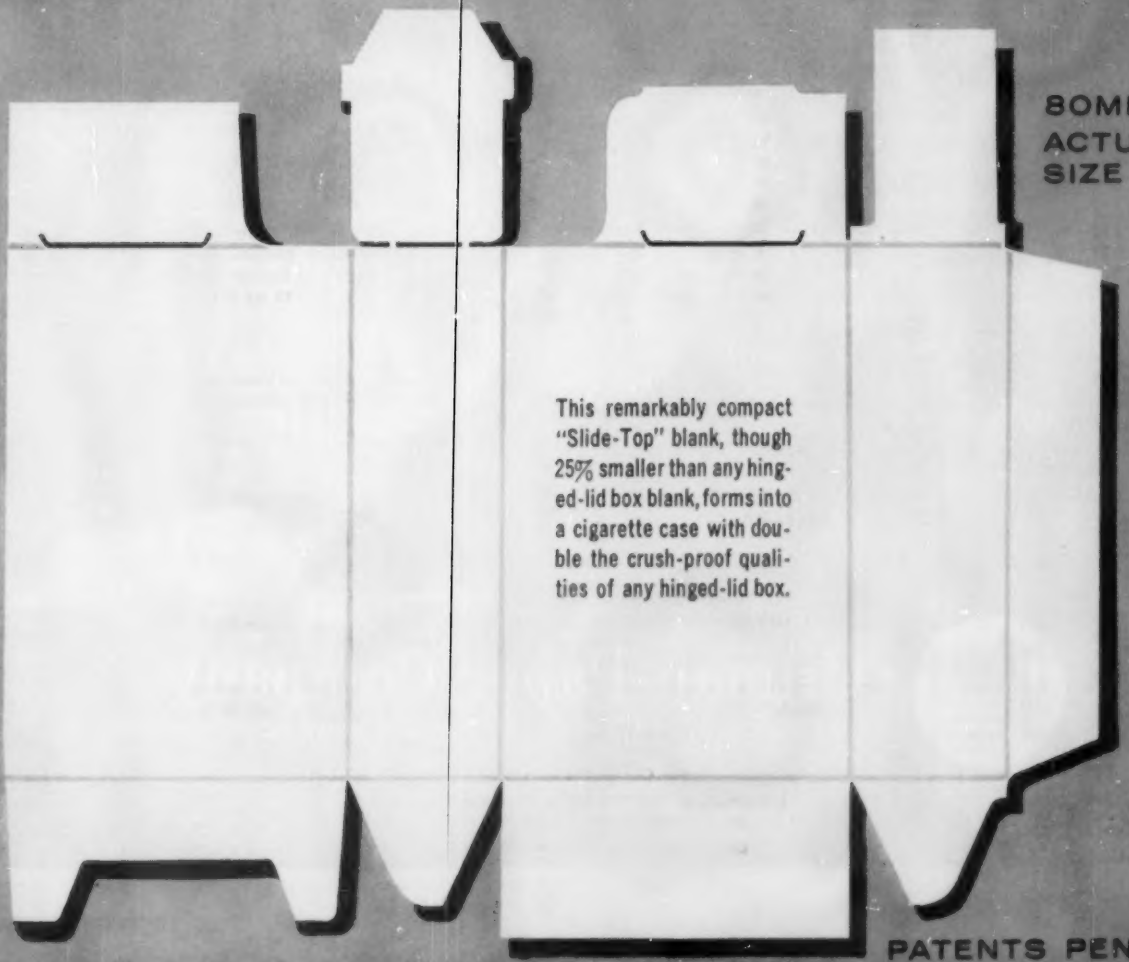
  "Slide-Top" case blank 25% smaller than any hinged-lid box blank—yet forms into a case twice as crushproof.

- **Unlimited Paperboard Alternatives**

  "Slide-Top" case can be produced from pure sulphate or coated newsback.



**THIS ONE-PIECE BLANK PRODUCES THE NEW "SLIDE-TOP" CASE ON 3-79 AMF STANDARD PACKERS EQUIPPED WITH A SIMPLIFIED HARD-BOX-BLANK FEED ATTACHMENT.**



80MM ACTUAL SIZE

This remarkably compact "Slide-Top" blank, though 25% smaller than any hinged-lid box blank, forms into a cigarette case with double the crush-proof qualities of any hinged-lid box.

PATENTS PENDING

# *Clear Sailing Ahead in Bleached Sulphate Board!*

**The trial runs are over!**
**The race is won!**

Employing only virgin pulp, an unique bleach plant, a new paper machine and an inspired technical staff, we now produce highest purity, highest quality bleached sulphate board with surface designed for improved roto, litho or letterpress printing.

All types of bleached board, including food container stock and liner board, are manufactured in our completely integrated plant at St. Marys, Ga.

*Your inquiries are invited.*

Gilman PAPER CO.
• St. Marys Kraft Corp.
• Gummed Tape Div.
• The Gilbound Corp.
• Kraft Bag Corp.

## Gilman Paper Company

630 FIFTH AVE., NEW YORK 20, N. Y.; DAILY NEWS BLDG., CHICAGO 6, ILL.

# When "Feeling" runs high—

# VITAFILM Protects!

Are you taking losses because you're at a loss as to just how to protect your product *and still merchandise it to best advantage?*

Seems for certain sure, then, you haven't yet made the acquaintance of VITAFILM — the Goodyear packaging film that is the greatest thing you can place between you and your customers!

*Fact is:* for hard goods, paper products and textiles you just can't beat it.

*Reason:* VITAFILM has qualities you just can't buy in other films—even those of substantially higher cost.

*Examples:* VITAFILM has wonderful contact clarity, welds to a permanent seal, has excellent machinability, doesn't attract dust, prints well, transmits texture "feel" and true color as though there was nothing between customer and product!

In standard package put-ups, trayed overwraps, bagged merchandise—any way you want it, with VITAFILM your products gets...

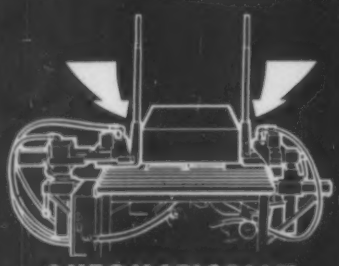
**The Finest In *Sheer* Protection**

**Vitafilm** a new **GOODYEAR PACKAGING FILM**

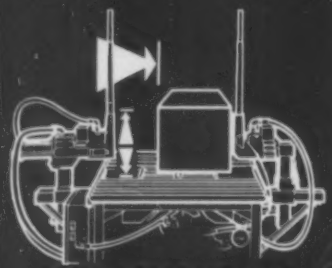
Vitafilm, a Polyvinyl chloride — T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

**GET THE FACTS** from the Goodyear Packaging Engineer. Write or call: Goodyear, Packaging Films Dept. D-6418, Akron 16, Ohio.

# The Age of Automation comes to carton-closing



**AUTOMATICALLY**
closes both ends of carton at the same time—after it's filled!—up to 1000 cartons per hour.

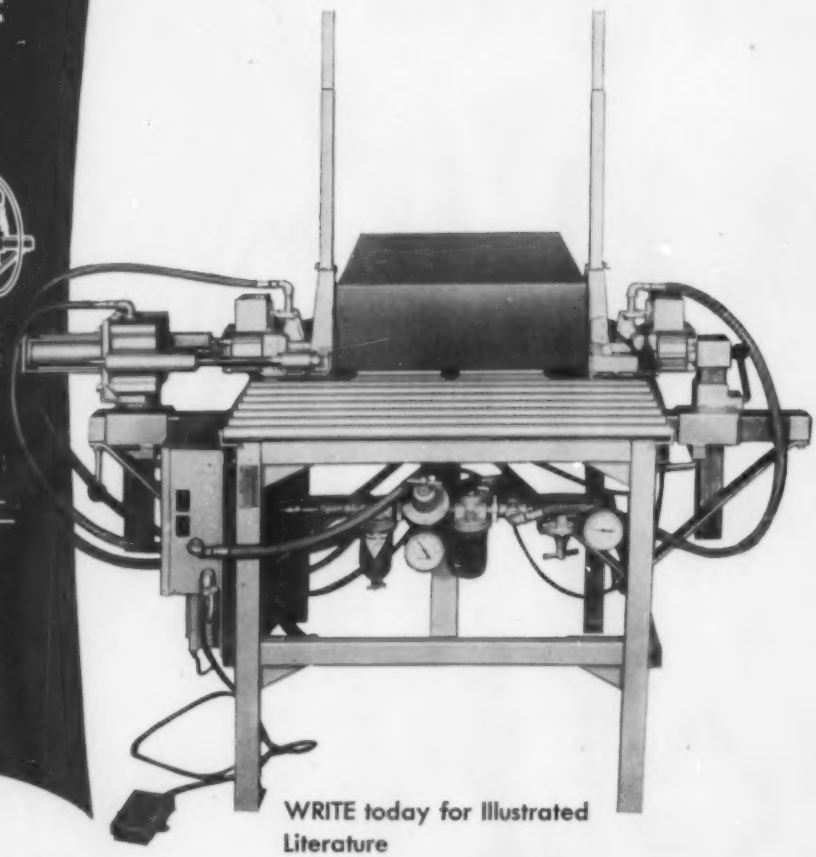


**AUTOMATICALLY**
adjusts to a wide variety of carton sizes and shapes! Stapling heads adjust for height; width of carton adjustment is automatic.

**AUTOMATICALLY**
powered by air and electric, for fast, effortless operation!

see the new

## *International* TWIN-END STAPLER IN ACTION!



WRITE today for Illustrated Literature

INTERNATIONAL *Gold Crown*

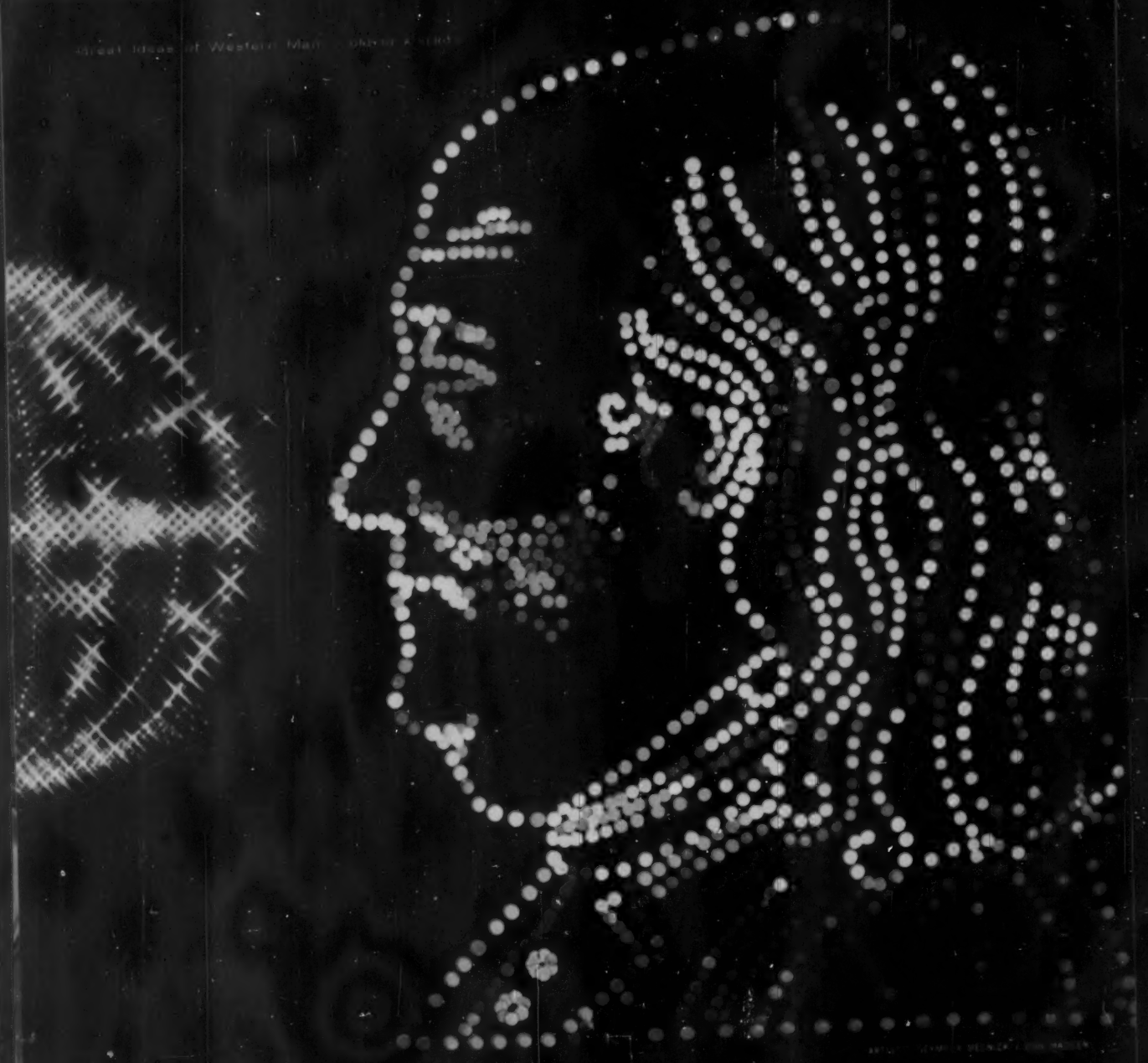
STEEL STAPLES SEAL SECURELY

# *International Staplers*

INTERNATIONAL STAPLE & MACHINE COMPANY

*Originators of Carton Closing Staplers*

806 E. HERRIN STREET • HERRIN, ILLINOIS



## BENJAMIN FRANKLIN ON UNIVERSAL UNDERSTANDING

God grant that not only the love of liberty but a thorough knowledge of the rights of man may pervade all the nations of the earth, so that a philosopher may set his foot anywhere on its surface and say: "This is my country."

## THE JOHN DALE GROUP for quality and service

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INTRO
DUCING

The family name
—KRAFTSMAN—
has been selected
for the entire line
of Westvaco
containerboard. For
these are container-
board products
made by *craftsmen*
for *craftsmen.*

# KRAFTSMAN

the complete line of kraft containerboard by Westvaco

The KRAFTSMAN family includes standard and special-purpose kraft linerboard and corrugating medium in a wide range of weights. New grades have been added to assure a *complete* line for every conversion need.

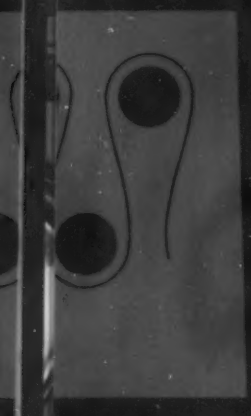
WEST VIRGINIA PULP A

**KRAFTSMAN LINER**

—A top-quality kraft linerboard. Strong in all respects. Even-textured surface provides excellent printability.

**KRAFTSMAN SUPERLINER**

(formerly known as ISL)—The smoothest, brightest, unbleached kraft linerboard on the market. Provides outstanding printed appearance for any corrugated container.



**KRAFTSMAN WHITELINER**

—A bright-white test linerboard. Developed by Westvaco especially for use in promotional containers and displays.

**KRAFTSMAN WEATHER-TITE LINER**

—A special kraft liner incorporating wet-strength resins. Specifically designed to meet the needs of high-humidity containers.

Westvaco's tradition of product quality and uniformity is a basic feature of the KRAFTSMAN line. "KRAFTSMAN by WESTVACO" means the finest in containerboard products of all types for you and your customers.

**KRAFTSMAN DURA-CORR**

—A high-quality corrugating medium. Special furnish gives high crush resistance and extreme stiffness.

**KRAFTSMAN WEATHER-TITE DURA-CORR**

—Corrugating medium with extra strength and rigidity. Ideal for use in high-humidity containers.

**AND PAPER COMPANY**

# KRAFTSMAN

**means superior customer service, too.**

L. FRANK THOMPSON
*Charleston Mill Manager*

These are some of the KRAFTSMAN specialists responsible for satisfying your containerboard needs. This team of manufacturing, sales and technical service personnel can show you how to improve your corrugated container production and sales when you specify KRAFTSMAN.

KRAFTSMAN products are manufactured at our modern Charleston, S. C., mill, where precision controls throughout the process insure products of high quality and uniformity.

The KRAFTSMAN sales staff represents more than 75 years of combined experience in servicing containerboard users. Our sales representatives are supported by an experienced technical service staff, which assists all KRAFTSMAN customers in solving even the most difficult production and conversion problems.

ROBERT S. KETTRICK
*Kraftsman Sales Manager*

REGINALD T. RYCE
*Sales Representative*

DONALD J. BEARDSLEY
*Sales Representative*

HARRY J. SCRUTON
*Sales Representative*

DELBERT E. THOMAS
*Sales Representative*

GORDON C. WINSTON
*Sales Representative*

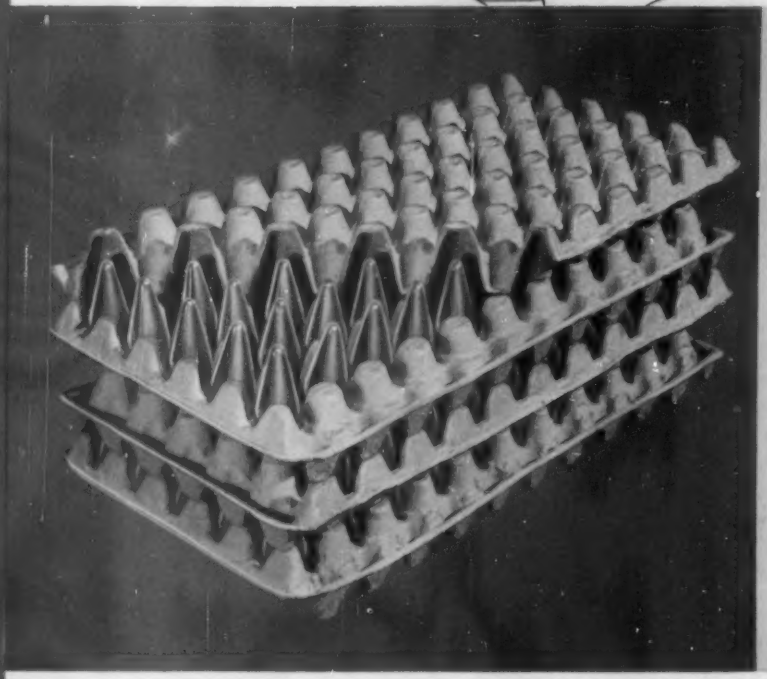
JOHN M. McCLURE
*Technical Representative*

Call your KRAFTSMAN representative today. Learn how all your containerboard needs can be satisfied by using KRAFTSMAN products made by Westvaco.

**WEST VIRGINIA PULP AND PAPER COMPANY**

**230 PARK AVENUE, NEW YORK 17, NEW YORK**

# BEDS for BULBS



custom-fitted
protection
cuts costs
for
light bulb
manufacturers

*If you have a delicate packaging problem, be wise—call Keyes!*

Be Wise-Buy

KEYES
MOLDED
PRODUCTS

A wide variety of fragile products—foods, glassware, electrical parts and many others—are now packed more efficiently with Keyes molded pulp shapes. In addition to eliminating losses from damage in transit, packers usually find that molded pulp actually costs less than ordinary packing materials and saves valuable storage and shipping space. Take advantage of these savings. Years of experience in the field of molded pulp, coupled with modern plants and manufacturing skills, are available at Keyes to design and produce better packaging for you.

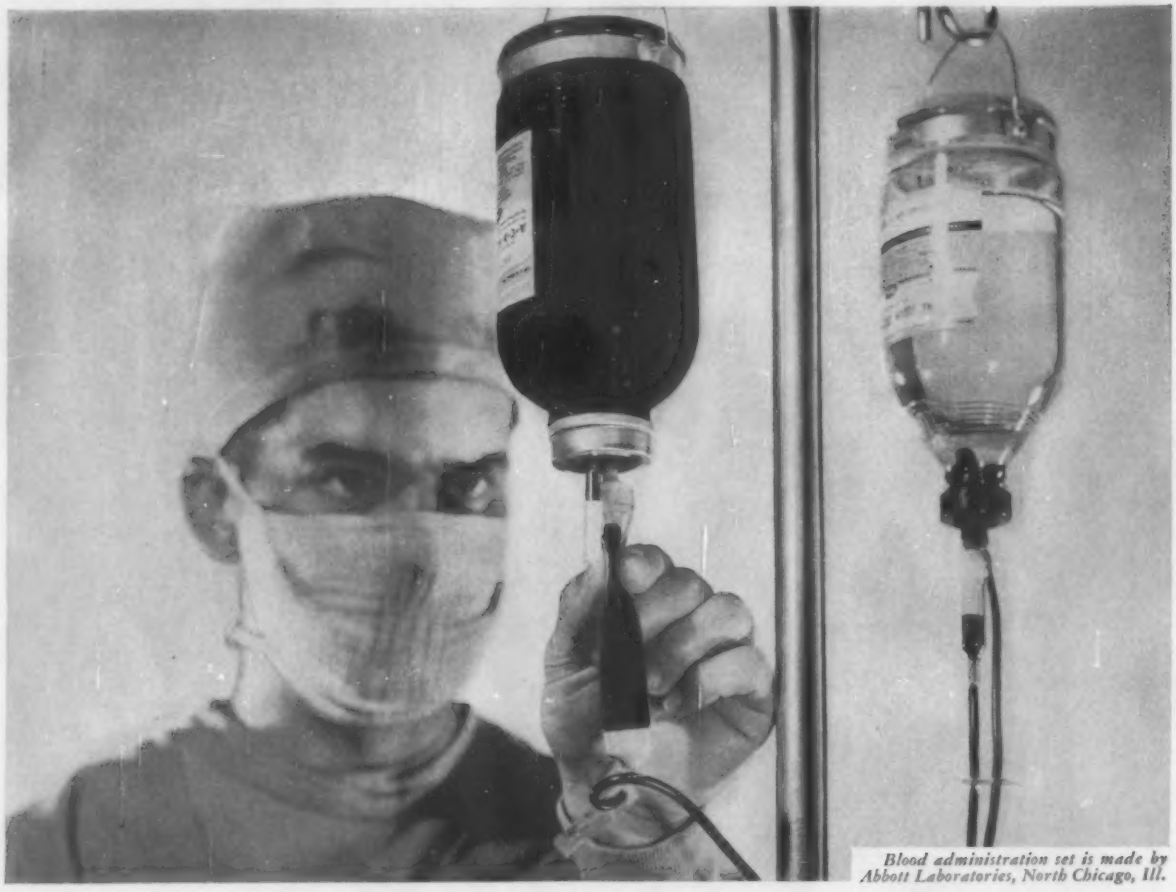
**MAKERS OF FAMOUS ROYAL CHI-NET® MOLDED PAPER PLATES**

*Product Development Division, Dept. MP*

**KEYES FIBRE COMPANY WATERVILLE, MAINE**

***Another new development using***

# B.F.Goodrich Chemical *raw materials*



*Blood administration set is made by Abbott Laboratories, North Chicago, Ill.*

## Squeezable Geon container keeps blood flowing

THAT plastic filter chamber under the bottle of blood helps make intravenous injection safe and dependable. The chamber, made of Geon polyvinyl materials, is clear, thus serves as a "sight glass". It's flexible, so a light squeeze eliminates clogging. And, since Geon is inert, non-contaminating, and can be sterilized without harm, it meets the strict requirements of this application.

Another major benefit can't be seen. Although Geon is recognized as the standard for uniform high quality in polyvinyl resins, its cost is reasonable. Thus the whole unit is disposable—safer by far than equipment which must be sterilized, packaged, inspected, and stored for re-use.

The properties and versatility of Geon find many applications in packaging, such as:

- **moisture-proof coatings for cartons or drums**
- **transparent film for product display**
- **molded boxes and display cases**
- **flexible seals and liners**
- **binder for packing materials**

For information write Dept. DQ-2, B.F.Goodrich Chemical Company, 3135 Euclid Avenue, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada, Kitchener, Ontario.

**B.F.Goodrich Chemical Company**
**a division of The B.F.Goodrich Company**

**B.F.Goodrich** **GEON polyvinyl materials • HYCAR American rubber and latex • GOOD-RITE chemicals and plasticizers • HARMON colors**

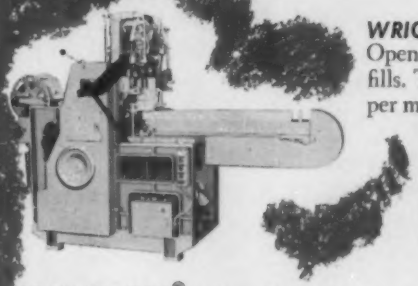
# *There's a New Star in the* WRIGHT LINE

A new addition to the Wright line was introduced at the 1957 Packaging Exposition. It's the Junior Weigher for manufacturers who package a variety of products.

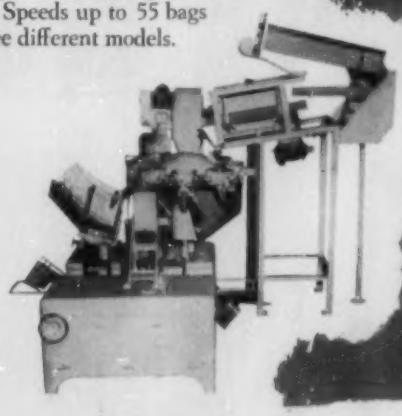
This modest-cost machine precision weighs and fills candies, cookies, crackers, beans, nuts and like items in bags, boxes, jars or cans. Weight range: one-half to 16 ounces. Speeds up to 20 per minute. Requires only minutes for change-overs.

***WRITE TODAY*** for detailed literature.

***WRIGHT JUNIOR WEIGHER***—No other multiple-purpose weigher in its price range equals the Junior Weigher's combination of accuracy, speed, gentle product handling and quick change-over ease.



***WRIGHT BAGMASTER®***—Completely automatic! Opens and positions the bag. Precision weighs and fills. Transfers bag to sealer. Speeds up to 55 bags per minute. Available in three different models.



***WRIGHTWRAP®***—Automatically stacks, wraps, seals and labels cracker sandwiches, fig bars and cookies. Speeds up to 120 packages per minute.

***WRIGHT 2-SG CARTONER***—Automatically sets up the carton, weighs and fills the product into the carton, and closes the carton. Leading candy manufacturers are among major users.

**WRIGHT MACHINERY COMPANY**

**EST. 1893 • DURHAM, N. C.**

**SUBSIDIARY OF SPERRY RAND CORPORATION**

**District Offices:**
*Ridgefield, N. J.; La Grange, Ill.; Dallas, Texas; Durham, N. C.*
**Canada:**
*Sperry Gyroscope Ottawa Limited, Ottawa, Ontario, Canada*
**Export Department:**
*13 East 40th Street, New York 16, N. Y., U. S. A. Cables: ARLAB*

# DIXIE'S Dynamic New Carton Overwrap *Increases* Sales for Num Num Pretzels!

Num Num Foods, Inc., Cleveland, Ohio, reports sales increases of more than 15% after changing to Dixie's SUPER VELV-O-SEAL overwrap shown on the opposite page.

What's more, this Dixie produced design won First Award for the best waxed carton overwrap on display at the National Flexible Packaging Competition in Cleveland last Fall.

Dixie's experienced art department can help redesign your package for increased sales . . . and Dixie's superior SUPER VELV-O-SEAL can add more protection and beauty to your product.

Call or write your nearest Dixie plant for details.

AWARD WINNER

DIXIE
*Wax Paper Company*

DALLAS, TEXAS • MEMPHIS, TENN. • WASHINGTON, N. J. • BURLINGAME, CALIF. • MEXICO, D. F.

Pretzels

# Num★Num

39¢

NET WT. 12 OZS.

# Pretzels

Pretzels

DIXIE'S

Yum-Yum

Num Num Pretzels

39¢

NET WT. 13 OZS.

Pretzels

# New packaging flexibility with VacForm vacuum forming machines

ADVERTISING DISPLAY MATERIALS

RIGID TRANSPARENT PACKAGING

BLISTER PACKS

- *greater variety of shapes, designs and plastic materials*
- *lower machine and tool costs*
- *no specialized technical experience needed*

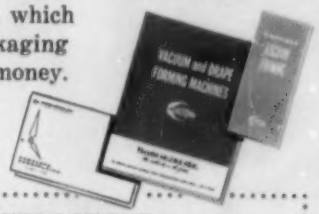
With this new, low-cost molding process, you can completely control your packaging by manufacturing your own containers—inexpensively, in practically any quantities, and in an almost unlimited variety of shapes and sizes. You can test new types of packages, change from one kind to another, with less time lapse, less capital outlay, than ever before.

VacForm vacuum forming machines enable you to make your own contour containers . . . portioned and single-service containers . . . "skin" and "blister" protective and pilfer-proof packages . . . skin-tight wraps and hard-to-package items . . . rigid transparent containers, both reusable and disposable.

VacForm reduces your packaging research and testing costs. It makes it easy to produce packages in short-runs. Automatic models lower costs for large quantities.

We will be glad to demonstrate the many ways in which VacForm packaging can save you money.

Write for new booklets.



VACFORM

PLASTIC FORMING MACHINERY

**EMHART MANUFACTURING COMPANY**

HENRY & WRIGHT DIVISION

760 Windsor Street • Hartford 1, Connecticut

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Send us information of VacForm and VacTrim applications, advantages and operation . . . including catalog and "Management Guide to Vacuum Forming."

Name_____ Title_____

Company_____

Street_____

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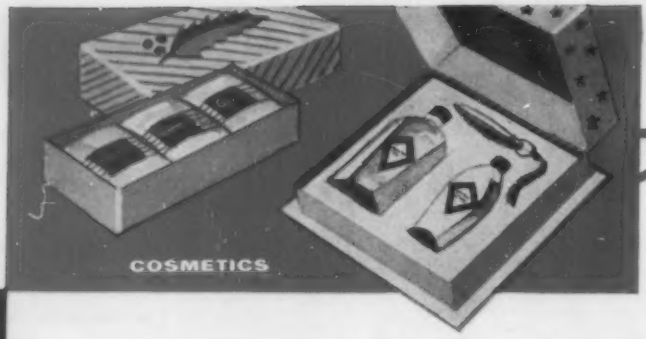
Principal business_____

MP-457



# Put Glamour

## IN CHRISTMAS PACKAGING WITH

# Cochran Foil

Use Cochran foil for labels, over-wraps, and laminated cartons. Obtain distinctive and decorative effects with foil and put Christmas brilliance in your packaging. You can emboss it and print it by any process, using both opaque and transparent inks. Yes, the packaging possibilities with Cochran Foil are almost limitless!

Now is the time to find out how your packaging supplier can add luster and sales appeal to gift packaging —with Cochran foil.

For further information, and the booklet, "Meet Cochran Foil", write 1430 S. 13th Street, Louisville 10, Kentucky, Department F-4.

**Cochran FOIL COMPANY**
Incorporated

PLAIN, LAMINATED, COLORED AND COATED FOIL FOR PACKAGING AND INDUSTRIAL APPLICATIONS • COILED ALUMINUM SHEET

WATCH COCHRAN

**FOR NEW DEVELOPMENTS IN FOIL**

**A SAMPLE OR**

**A CARTON**

## PACKAGING THAT LOOKS BETTER

## PACKAGING THAT SERVES BETTER

**...A Complete-Range Line of Fine Coated Boards PLUS**

**...A Comprehensive Coating Service.**

Whether your packaging be decorative or functional, its *prime* purpose is more sales! Stimulating sales through better packaging materials is the essence of our business. It's a business that ranges from finished boxboards for cartoning foods, beverages, toiletries, and a hundred others ... to a materials' coating service for Kraft lined displays, carriers, moisture-proof bags, tags, coated sulfate board and many others. Very possibly—Ridgelo "know-how" can be put to work profitably for you. Want to find out? Simply ask, and there will be no obligation in any event.

**Ridgelo**
**CLAY COATED**
REG. U.S. PAT. OFF.
**BOXBOARDS**

**+ plus**
**A CUSTOM COATING SERVICE FOR PACKAGERS**

*Write For Free Samples*

**#90 ULTRAGLOSS** (glazed) • **#75 BRUSH FINISH** (silky smooth) • **CUSTOM COATED** (for lacquer or varnish)

**STANDARD COATED** (fine machine coating) • **METALLIC COATED** (bright, foil-like) • **POLYETHYLENE COATED** (protective barriers)

**LOWE PAPER COMPANY • Ridgefield, N. J.**

*An Independent Mill—Serving Industry Since 1906*

*Representatives* • **Detroit**—Joseph P. Giroux • **Los Angeles**—Norman A. Buist • **Philadelphia**—Philip Rudolph & Son, Inc. • **St. Louis**—A. E. Kellogg

Klingseal coated Cellophane for natural cheese blocks

Poly-Cellon for Vacuum Pack

Klingseal coated Cello-Foil

Die Cut Klingseal coated Cellophane

# SEE MILPRINT FOR EVERY CHEESE PACKAGING NEED!

Shoppers' eyes focus easily *and often* on bright, colorful Milprint dairy packages! That's why so many alert natural cheese producers insist on shopper-stopping Milprint wraps . . . with Klingseal coating to preserve the elusive natural goodness of their products . . . with the brilliant precision printing that stays the fleeting glance of today's supermarket customer — and closes more sales every hour, every day!

For the widest variety of packaging materials and printing processes available anywhere . . . for your every dairy packaging need, make it a point to call your Milprint man — *first!*

**Milprint*** INC.
PACKAGING MATERIALS

GENERAL OFFICES, MILWAUKEE, WISCONSIN
SALES OFFICES IN PRINCIPAL CITIES

Printed Cellophane • Pliofilm
Polyethylene • Saran • Acetate
Glassine • Vitafilm • Foils
Laminations • Folding Cartons • Bags
Lithographed Displays
Printed Promotion Material

This insert lithographed by Milprint, Inc.

*Reg. U. S. Pat. Off.

ipi

# complete

## FLEXO INK SERVICE

FOR PACKAGE PRINTERS COAST TO COAST!

**complete** **LINE OF FLEXO INKS**

IPI continues to pace the package printing ink field with such great new flexo inks as Flexogem and Flexotuf multi-purpose flexo inks, special heat-resistant inks and fast-drying water-base inks such as Aqualox. We invite you to try them.

**complete** **NATION-WIDE DISTRIBUTION**

New IPI flexo inks are available in printing centers from coast to coast—wherever you find an IPI branch office and service station. Wherever you are located, you will always find IPI flexo inks readily available.

**complete** **TESTING FACILITIES**

IPI flexo inks are always thoroughly tested on the press before they are released—in Interchemical's central laboratory headquarters, in IPI labs and factories. Tests for color uniformity, performance standards, toughness and durability assure uniform quality in every batch.

**complete** **SERVICE FACILITIES**

IPI branches and service stations are staffed by local technicians who have grown up in your vicinity and who know local printing problems. When you need flexo inks, turn to the people who know packaging inks best—IPI ink men. Priced competitively, IPI inks give best results. Try them today.

*IPI, IC, Flexogem, Flexotuf and Aqualox are trademarks of Interchemical Corporation*

ipi

INTERCHEMICAL PRINTING INK

CORPORATION DIVISION

EXECUTIVE OFFICES: 67 W. 44th ST., NEW YORK 36, N. Y.

## Background for packaging

*Notes, quotes and comments*

**Disparity** in costs of cellophane and polyethylene grows wider. While price of polyethylene film moves steadily lower, cellophane producers have announced increases of 4 to 5%. And note, in this issue ("Lighter-weight Polyethylene," p. 92), the first use of a new thin-gauge polyethylene that costs only *half* as much as equivalent cellophane. Is cellophane's place as the No. 1 transparent flexible packaging material threatened? Judging from their continuing announcements of plant expansions, cellophane producers don't think so.

**New excitement** in the cigarette field over a new U. S. hard box—this one with an ingenious slide-back top that opens and closes like a cigarette case (see p. 196). Vital point: it reportedly handles on conventional AMF machines with only slight modifications and cellophane wraps, with tear strip, same as the cup pack—with which it supposedly competes in cost. If all the claims made for it prove out in practice, it may sweep the industry and leave adopters of the present hard box ruefully contemplating multi-million-dollar machinery bills.

**Amazing speeds** claimed for new machinery introduced at this spring's shows has packagers buzzing. Minute Maid is getting a 36-head filler for orange-juice concentrate that will run 1,000 cans a minute. There's a new Hamilton can-body maker that spews out 455 a minute. Even polyethylene bottles—the problem child of high-speed production—can now be filled at 450 a minute.

**Problems loom** for suppliers if the rest of the pharmaceutical industry follows Eli Lilly's lead in converting from avoirdupois to the metric system of measurement for all external as well as internal operations. All Lilly suppliers are now being required to supply raw materials in containers bearing gross, tare and net weights in metric, as well as to price invoices in metric. Other big pharmaceutical companies are preparing to follow suit.

**Packaging's story** is being dramatically brought home to many millions of consumers through American Can Co.'s TV show. While it sells cans, it also sells the economy of mass-produced packaging as a whole. A recent program, viewed in an estimated 35 million homes, displayed cans that are now responsible for convenient, low-cost supply of more than 130 different kinds of meat.

**A&P has dropped** outdoor vending machines after test at its Levittown store. Although A&P doesn't say why, some merchandisers fear that outside vendors cut down on in-store traffic. Grand Union is continuing a similar test.

**Supers' non-foods** trends and policies will get serious attention with the formation of a Non-Foods Productivity Committee by the Super Market Institute. Says *Don Parsons*, SMI's executive director: "The development of non-food lines in supermarkets, with its attendant problems, has created a real need for some basic thinking and the coordinated exchange of knowledge and experience on non-food matters within the industry."

**No premiums?** Says Ralston Purina Co., which a year ago dropped premium offers from its cereal packages: "Ever since Ralston closed its toy department, sales have gone up month [*Continued on page 42*]

# Your packaging showmanship begins at Dow

## *Show it in* **STYRON** *and sell it!*

It has to be *seen* to be sold. Here is packaging that does your selling where it counts . . . right at the point of sale.

Distinctive plastic containers made of Styron® put your product on display to clinch more of those lucrative impulse sales. And their complete protection en route and on the counters guards the freshness and flavor that assure repeat sales.

Time to give your product a sales lift? Then let Dow Packaging Service help you put the showmanship in your packaging that means a fast-moving, sell-out performance.

*The Dow Chemical Company does not fabricate finished packages, but rather is a raw material supplier to leading manufacturers.*

*Show it in* **SARAN WRAP** *and sell it!*

Never has flexible packaging done so much for flavor . . . for freshness . . . for sales!

The sparkling beauty and satin softness of Saran Wrap* give no hint of its toughness and protection. And its transparency puts on a show of appetite appeal shoppers can't resist.

The Saran Wrap hallmark of protection on your package tells homemakers you're giving them the best. Dow Packaging Service is ready to help you design the right package for your product. Write today! THE DOW CHEMICAL COMPANY, Midland, Michigan, Packaging Service PS1513E.

*Trademark of The Dow Chemical Company

**YOU CAN DEPEND ON**

DOW

after month, every single month for a year, better than they ever were with premiums," Ralston's experiment, in the belief that emphasis on premiums detracts from appreciation of the product itself, is being watched by competitors in this and other premium-plagued industries.

**Ad man's influence** in packaging decisions continues to gain. "Many of our most successful designs," says Package Designer *Jim Nash*, "are now developed in close cooperation with the client's advertising agency or department. Everyone benefits. The agency can produce a more effective campaign with a well-designed product and package; the industrial designer is guided by his knowledge of the agency's plans and problems, and the manufacturer's sales force is handed a well-coordinated fistful of sales ammunition."

**Watch for** imminent applications of a new kind of coated and thermoplastic-sealed folding carton so effective that it can eliminate duplex packaging in some very big product fields. One application, in frozen foods, will demonstrate elimination of the overwrap; another, for a cereal product, will do away with the traditional inner waxed paper.

## Background for packaging

**Standardization** triumphs again with acceptance by more than 70 margarine and carton manufacturers of the 1⅝-by-5⅛-by-4⅞-in. dimension for the 1-lb. Eastern flat margarine carton as recommended by the Department of Commerce. Now the D. of C. and the Paraffined Carton Research Council are working together toward further standardization of such details as flaps, tucks, cuts and scores. And the Elgin style will be tackled next.

**Coming** are foil-lined corrugated boxes that will hold water for weeks; foil-laminated paper bags that provide the sealed protection of steel drums; foil-and-paper boxes that can be hermetically sealed like cans and packaged with their own built-in heating or cooling units. So predicts *J. S. Hamilton*, foil sales manager of the Aluminum Co. of America, before the Chicago Merchandising Executives Club.

[*Continued from page 39*]

**Reading time** of the average American business executive, according to an American Management Assn. survey, is at least one quarter of his waking hours. He spends at least a sixth of his total reading time on business magazines; in addition to the business magazines circulated by his company, he has personal subscriptions to an average of eight. What's *your* score?

**Advice** to annual convention of National Retail Dry Goods Assn. by *B. Lewis Posen* of Hochschild, Kohn & Co., Baltimore: "Department-store executives feel strongly that we should take a good long look at packaging, adopt its good points, recognize its virtues and limitations and make packaging pay off . . . Packaging is a complete, over-all, all-encompassing function covering every phase of department-store operations."

**Deals and premiums** still have a powerful appeal to the supermarket-shopping housewife. And the package is the most powerful way of promoting them. Of 262 housewives interviewed by Nesbitt Associates, New York, 106 stated that for items on their supermarket shopping lists they make a point of seeking out and inspecting those packages that offer them a little something extra for their money. In special-offer effectiveness, the package itself led all other media by almost two to one. More than 55% of those interviewed declared deals and premiums increasing, rather than declining, in influence on them.

START HERE

COLUMBIA BOXBOARD MILLS

MILL TRAINED SALES FORCE

EXPERT STOCK PREPARATION

MODERN MACHINERY

CONSTANT QUALITY CONTROL

VARIETY OF PRODUCTS

HIGH GRADES

1ST

LABORATORY TESTED

STEEL SKIDS

NEW TRUCK FLEET

OVERNIGHT DELIVERIES

DELIVER TO

MILTON BRADLEY CO.

TAKE 11 GIANT STEPS!

(ANY NUMBER CAN PLAY)

Move ahead in the game of competition . . .

Play it the way Milton Bradley Company does. They're the world's foremost manufacturers of games — *and they make 'em of Columbia boxboards!*

Everyone wins with Columbia boxboards. They're strong, light, economical — and they *keep* that fresh, "just-printed" look you'll find so valuable at the point of purchase.

You'll reach your goal faster by using versatile Columbia boxboards for every boxmaking and packaging purpose.

*40 Years of Progress*

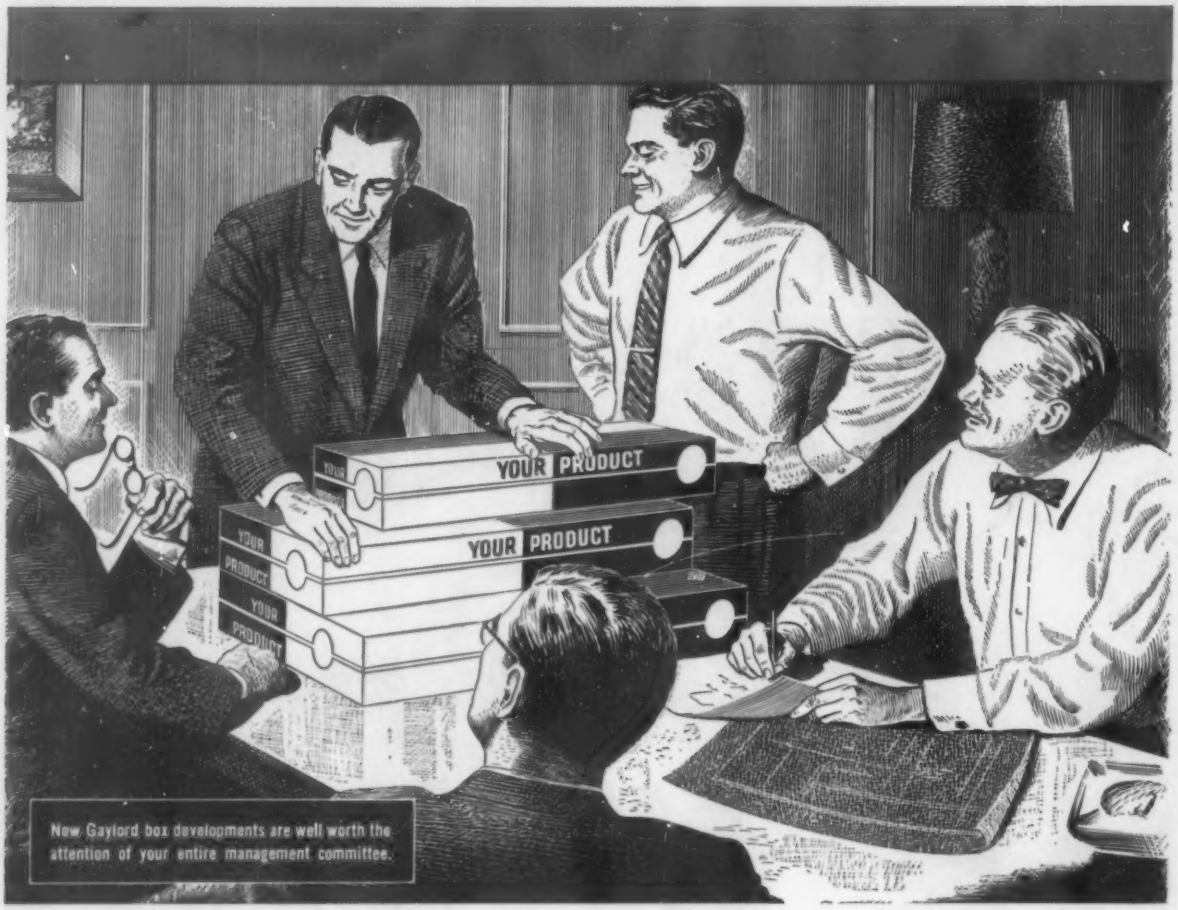
COLUMBIA 40

COLUMBIA

BOX BOARD MILLS, INC

CHATHAM AND WALLOOMSAC, N. Y.

*Makers of famous Krofibre*


YOUR PRODUCT
YOUR PRODUCT
YOUR PRODUCT
YOUR PRODUCT
New Gaylord box developments are well worth the attention of your entire management committee.

# ARE YOUR BOXES 1957 MODELS?

*How long since you've reviewed your boxes? Packaging development moves fast. Boxes can become "dated" in just a few years.*

*Gaylord is constantly developing new protective designs, using new specialized materials, new engineering techniques, new box-making methods, new printing ideas.*

*Your nearby Gaylord packaging engineer will help you up-date your boxes . . . make them work harder, look handsomer, pay off better for you. Call him now.*

Gaylord Boxes

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

GAYLORD CONTAINER CORPORATION ★ ST. LOUIS

DIVISION OF CROWN ZELLERBACH CORPORATION

# Win, Place or Show

One of these horses is in a real good pocket. From here . . . with the stretch coming up . . . it looks like he's not going to make it. This gives light lie to the legend that improvement of breed is the basis for horse racing. Proof? Ask the man who has money riding. He wants a winner . . . you take the blood lines.

And so it happened to the ice cream industry around the turn of the century. As many other products already had done, this perishable delight had to get out of the kitchen and into a plant in order to compete.

It was Sealright that came up with the first, cylindrical, liquid-tight, container, and for the first time people were able to buy, carry, and store ice cream safely.

Not too long ago, Sealright topped all competition again by developing another exclusive original . . . plasticized paper. By special process of plastic-coating paper, Sealright produced a material with the strength and taste protection of glass plus the lightness and economy of ordinary paper.

Sealright's long, impressive record of firsts in the ice cream – and dairy industries – naturally has attracted attention everywhere. Today, hundreds of diverse types of industries have benefited from the advantages inherent in using Sealright containers for their products.

If you are looking for new, dramatic and profitable merchandise ideas in packaging, Sealright is ready with some of the freshest you have had in a long, long time. *Just write.*

We use SEALRIGHT SANITARY SERVICE for Your Protection

*Just Write*

**Sealright**

There's a SEALRIGHT Creative Package Idea just RIGHT for your product . . . send for samples of NEW ideas in packaging.

SEALRIGHT CO., INC., FULTON, NEW YORK

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

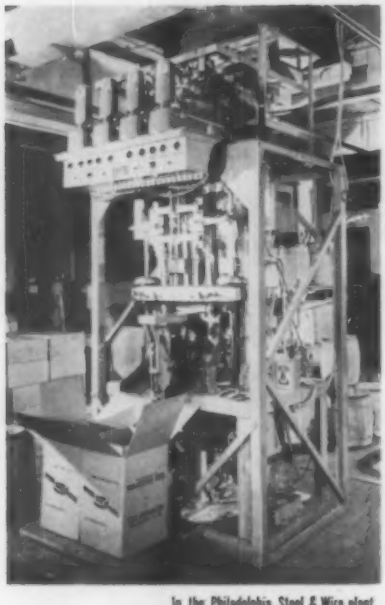
Oswego Falls Corp.—Sealright Co., Inc., Fulton, N. Y.—Kansas City, Kansas—Sealright Pacific Ltd., Los Angeles, California—Canadian Sealright Co., Ltd., Peterborough, Ontario, Canada.

# from this

Another outstanding packaging "FIRST"!

# to this

# with MYLAR* and STOKESWRAP



In the Philadelphia Steel & Wire plant, STOKESWRAP automatically packages and codes 30 units per minute in a wide variety of sizes. Packages are delivered directly into shipping cartons.

## Significant new development produces a superior flexible package on automatic, high-speed STOKESWRAP at low cost

Mylar, the new transparent polyester film with a tensile strength one-third that of steel plus other highly desirable properties, has been successfully adapted to automatic, high-speed flexible packaging. It opens up a whole new field of exciting application possibilities.

### Automatic, low cost packaging

Coated with polyethylene extrusion on one side to assure positive heat sealing, Mylar is now being used to package sharp-edged steel spring-lock washers by the Philadelphia Steel & Wire Corporation. STOKESWRAP automatically forms a pillow-type package with a unique fold-over vertical seam from this preprinted Mylar film . . . then fills the package with a precisely controlled number of washers measured by a net weight scale feed mechanism. Each package is coded automatically for quick identification of many sizes and quantities. Package length is quickly adjusted accordingly.

Actual tests prove that these flexible packages withstand rough handling in shipping and are the equal of the metal-edge fibre carton previously used.

### From hardware to electronic components

Ideal for packaging hardware, automotive, electronic and similar small component parts, STOKESWRAP and Mylar may be the answer to cutting your costs.

*"Mylar" is the DuPont trade name for its brand of polyester film.

**STOKES & SMITH CO.**

4904-A SUMMERDALE AVENUE, PHILADELPHIA 24, PA.

*Pacific Coast:* SIMPLEX PACKAGING MACHINERY, INC., 534—23rd AVE., OAKLAND 6, CALIF.

fmc

SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

# *glass containers move more chemical specialties*

*Use* Anchorglass® *containers sealed with* Anchor® *caps*

## ...because they are chemically inert

GLASS containers are chemically clean and chemically stable. They add nothing, take away nothing from the contents. They prevent evaporation, leakage or absorption of moisture. The purity, strength and other qualities that characterize chemical specialties are protected until the package contents are entirely used. And glass containers invite product inspection, afford a visual inventory, inspire confidence for your product quality. Pack your products in Anchorglass® packages. You will move more of your products by doing so.

ANCHOR HOCKING
GLASS CORPORATION
*Lancaster, Ohio*

# did you ever buy a chameleon?

You can't control store lighting . . . but KVP can plan your package for it.

Remember how you marveled at those fragile little lizards that changed their color to match their surroundings?

*Packages are chameleons, too, under varied store lighting conditions.*

Red isn't always red, or blue always blue, or green always green!

What may look "good enough to eat" under one light may actually look unappetizing under another. And how *that* can affect sales!

The *right* colors are so important to you and your products that KVP has done something about color selection and control that opens a whole new area of color appeal.

You have to see it — to believe it — and profit by it. Write and ask for full details today.

KVP

THE KVP COMPANY · Kalamazoo, Michigan

**SPECIALISTS IN FOOD PAPERS FOR PROTECTION AND SALES APPEAL**

PLANTS AT KALAMAZOO, MICHIGAN • DEVON, PENNA. • HARVEY PAPER PRODUCTS DIVISION, STURGIS, MICHIGAN
ASSOCIATED COMPANIES: KVP COMPANY OF TEXAS, HOUSTON, TEXAS • IN CANADA: THE KVP COMPANY LTD., ESPANOLA, ONTARIO • APPLEFORD PAPER PRODUCTS LTD., HAMILTON, ONTARIO AND MONTREAL, QUEBEC

ON STREAM FOR YOU

MARLEX
50
POLYETHYLENE
Phillips
66
PHILLIPS CHEMICAL COMPANY
BARTLESVILLE, OKLAHOMA
NET WT. 50 LB.
INJECTION MOLDING
FILM

One by one, three thousand pumps take on their intricate assignments.

In the giant reactors, ethylene stirs and responds to a unique catalytic influence.

At Adams Terminal on the Houston Ship Channel, Phillips Chemical Company is now on stream with full scale manufacture of

# MARLEX 50

## POLYETHYLENE

***Right now*** the world's strongest, toughest ethylene polymer is available commercially.

***Right now*** you can get up to 40% more production per pound of resin by taking full advantage of the inherent strength of MARLEX 50. You may get up to 25% faster cycle time, too, because MARLEX 50 sets up at higher temperatures. ***And talk about service!*** MARLEX 50 withstands heat, cold and abrasion . . . it resists oil, solvents and chemicals with an unparalleled efficiency that suggests scores of new and profitable uses you could never touch before.

***Right now*** call your MARLEX sales representative. Find out how MARLEX 50 polyethylene is ready to make money for you in moldings, film, filaments, vacuum forming and many other applications.

*MARLEX is a trademark for Phillips family of olefin polymers.*

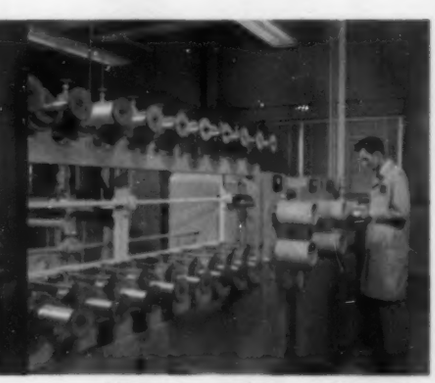
MARLEX®
50
POLYETHYLENE
PHILLIPS CHEMICAL COMPANY
Phillips 66
PHILLIPS CHEMICAL COMPANY
BARTLESVILLE, OKLAHOMA
NET WT. 50 LB.
PHILLIPS CHEMICAL COMPANY
ON STREAM FOR YOU
Visitors are welcom
Sales Service Lab
Actual operating c
are studied h
PLASTI
DISTRICT OFFICES

## IMAGINATION HEADQUARTERS

New uses . . . new processing methods for MARLEX 50 polyethylene are developed and tested in this Sales Service Laboratory at Phillips Research Center, Bartlesville, Oklahoma. Standard production machines are backed by a full range of evaluation and research laboratories. Here, skilled scientists, engineers and technicians are working for you. Their broad background in up-to-the-minute plastics technology is fully available to you through your MARLEX sales representative at his office listed below.

*are welcomed to our Service Laboratory*

*Fully equipped evaluation laboratory*



*Filaments are drawn under factory conditions*

*perating conditions studied here*

*Take up your special problems with our technical staff*

*We look forward to working with you.*

PLASTICS SALES DIVISION PHILLIPS CHEMICAL COMPANY

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY, BARTLESVILLE, OKLAHOMA

DISTRICT OFFICES

| | |
|---|---|
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| NEW YORK | 80 Broadway, Suite 2535, New York 5, N.Y. DIgby 4-3480 |
| AKRON | 318 Water Street, Akron 8, Ohio. FRanklin 6-4126 |
| CHICAGO | 111 S. York Street, Elmhurst, Ill. TErrace 4-6600 |
| WESTERN | 330 Security Bldg., Pasadena, Calif. RYan 1-6997 |
| SOUTHERN & FOREIGN | Adams Building, Bartlesville, Oklahoma. Bartlesville 6600 |

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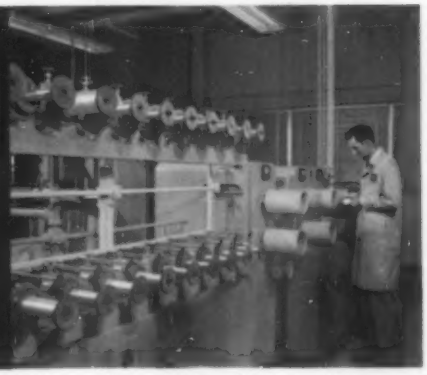
*Visitors are welcomed to our Sales Service Laboratory*

*Fully equipped evaluation laboratory*



*Filaments are drawn under factory conditions*

*Actual operating conditions are studied here*

*Take up your special problems with our technical staff*

*We look forward to working with you.*

PLASTICS SALES DIVISION PHILLIPS CHEMICAL COMPANY

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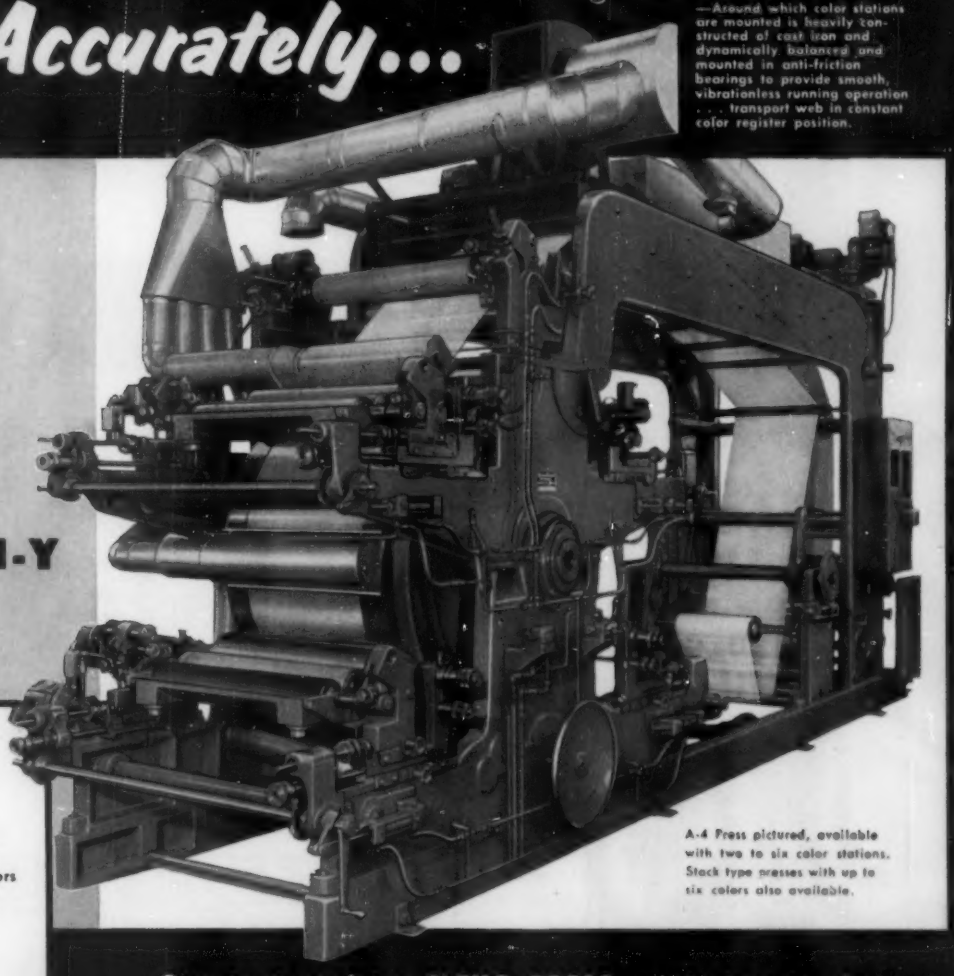
| WESTERN | 330 Security Bldg., Pasadena, Calif. RYan 1-6997 |
| SOUTHERN & FOREIGN | Adams Building, Bartlesville, Oklahoma. Bartlesville 6600 |

# Register Accurately...

*Single Impression Cylinder*

—Around which color stations are mounted is heavily constructed of cast iron and dynamically balanced and mounted in anti-friction bearings to provide smooth, vibrationless running operation . . . transport web in constant color register position.

**Highly detailed screen or line COLOR PRINTING ON S-T-R-E-T-C-H-Y FILMS**



A-4 Press pictured, available with two to six color stations. Stack type presses with up to six colors also available.

**Check carefully these important advantages:**

- High speed printing up to 1000 ft. per minute
- Standard presses with two to six colors
- Prints 20" to 50" widths, repeats 12" to 36"
- Continuously agitated splash-proof ink fountains
- Hydraulic color throw-outs
- Prints 1 mil. film to heavy weight papers
- Anilox type transfer rolls
- Automatic tension web controls for accurate print register and repeats
- Constant print repeats increase operating efficiency of automatic bag and packaging machines
- Handles unevenly wound rolls or webs of varying caliper
- High speed surface driers of advanced design between colors and before rewinding
- Flying splice unwind and rewind for continuous operation, optional
- Vibrationless, heavy duty cast iron construction
- Anti-friction bearings thru-out
- Easiest of all presses to operate—holds register at all speeds
- Reduces down-time and material waste to the minimum

**Constant register FLEXO-PRESS prints two to six colors with hairline accuracy on all types of packaging films, foils, papers and heavy-duty wraps**

High speed color printing of the finest quality on Polyethylene, Pliofilm, Mylar, Saran and other materials is greatly simplified with this modern press.

Holding *color impressions in accurate register* and *print repeats* over long runs is no problem. Once set, this press holds register at all speeds without readjustment. Web *locks-in* position on a single impression cylinder and is transported from color to color *without stretch or expansion.* Measured tension controls on both infeed and outfeed regulate stretch and keep repeats in constant register — even though roll may be unevenly wound or web of varying caliper. Prints materials of variable thickness from 1 mil. films to heavy weight papers.

Heavy duty, cast iron construction assures years of trouble-free service and smooth, vibrationless running operation even with the hardest of usage. Users acclaim our A-4 press as the easiest to operate—the most economical in down-time and material waste. Write us—we'd like to discuss its many advantages with you.

Other Hudson Sharp machines include Roto and oil ink presses, Automatic Roll Winders, Waxers, Embossers, Laminators, Folders, Core Winders, Crapers and Campbell Wrappers.

CONVERTING AND PRINTING EQUIPMENT

**HUDSON-SHARP MACHINE CO.**

GREEN BAY, WISCONSIN

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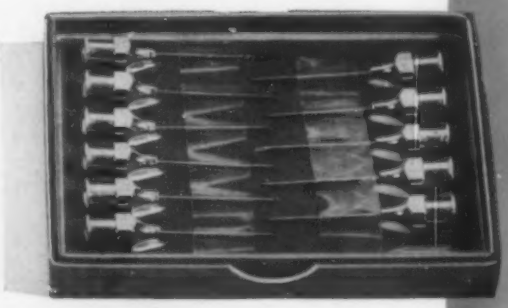
SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

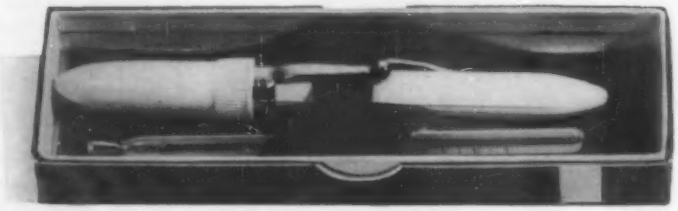
**The right ink for bright results**

# Rowell Boxes

Syringe Box



Needle Box



Thermometer Box

for distinction and utility

E. N. Rowell Co. Inc.
Batavia, N. Y.

Canisters, round and square set-up boxes for every purpose

ers, Core Winders, Crepers and Campbell Wrappers.

fmc

SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

# The right ink for bright results . . .

# NEW BBD MUL-T-BRITE INK

## . . . the modern multipurpose flexographic ink for Polyethylene • All Cellophanes • "Mylar" • Foil • Glassine

**GLOSSY** — Dries to a bright and lustrous finish on polyethylene...matches the gloss of slicker films

**BLOCK-FREE** — Doesn't block, ink-to-ink or ink-to-stock, at temperatures to 150°F., humidity to 85%

**WATER-RESISTANT** — Withstands wet refrigeration and other severe moisture conditions — eliminates need for varnish overprinting

**VERSATILE** — Ideal on treated polyethylene, all types of cellophane (including "Saran"-coated), "Mylar" and other polyester films, aluminum foil, glassine and paper

**MULTI-SPEED** — Works beautifully on any printing machine at any speed to 500 fpm

No matter what you print nor what kind of equipment you print it on—new BBD MUL-T-BRITE brings you the modern features you want in an ink. Real gloss . . . real color brilliance . . . real freedom from blocking . . . and real inventory-cutting versatility are all yours with MUL-T-BRITE.

This revolutionary new BBD ink is far different from conventional flexographic inks. It is a unique formulation based on a mild hydrocarbon system. That is why, in addition to the desirable end results it affords, MUL-T-BRITE enables you to stock a single type of ink. You can use MUL-T-BRITE, not only on every popular packaging material, but on every type of press. With only two solvents you can easily control MUL-T-BRITE's drying rate for top performance at slow, medium or fast speeds . . . see it work like a charm on every machine from an end-printer operating at 125 fpm to a high-speed press running at 500 fpm.

Find out now how you can enjoy the finer print quality and the lower ink inventory advantage that MUL-T-BRITE is bringing to flexographic printers from coast to coast. Your nearest BBD office will gladly arrange a trial run in your plant at your convenience . . . so contact BBD now.

For printed samples and more information about MUL-T-BRITE INK, write to *Bensing Bros. and Deeney, 3301 Hunting Park Avenue, Philadelphia 29, Pa.*

*Bensing Bros. and Deeney*

*Flexographic Ink Specialists*

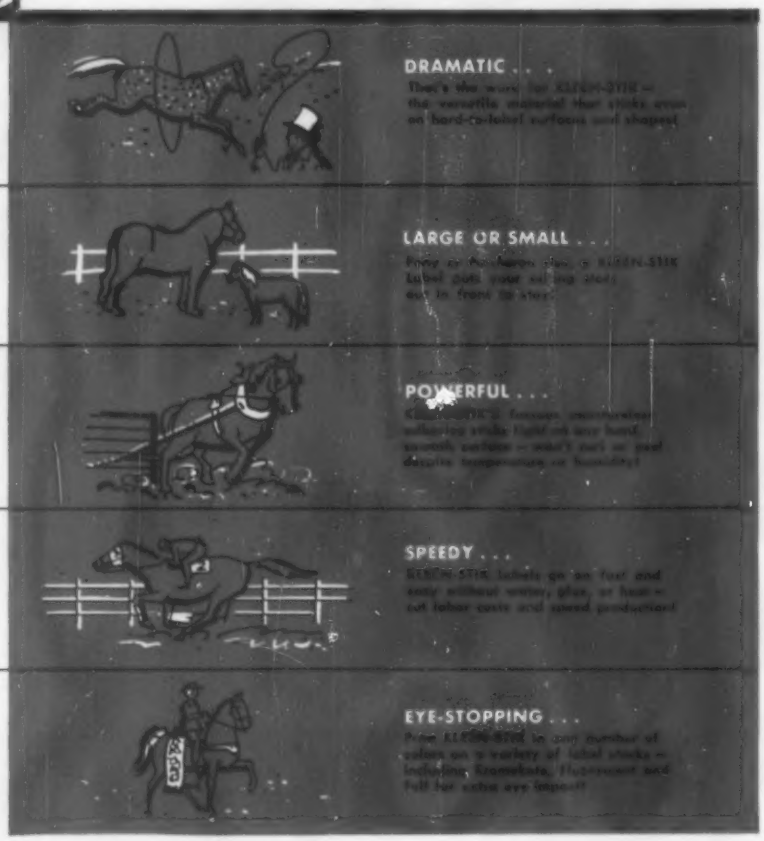
PHILADELPHIA • CHICAGO • SAN LEANDRO, CAL.
CAMBRIDGE, MASS. • MONROE, LA.

DISTRIBUTORS:
MARTIN BROS., Toronto, Canada
FRENAE CO., Brussels, Belgium
COLORA, LTD., Berne, Switzerland
PEREZ TRADING CO., New York (Export)
PAMCO, INC., San Francisco (Export)

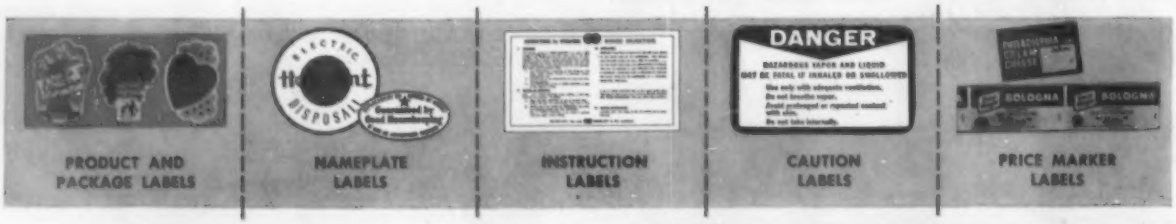
# Put more Selling "Horsepower" in your P.O.P. LABELS with KLEEN-STIK®

## MOISTURELESS, SELF-STICKING ADHESIVE

If your present product or package labels lack the power to pull your sales load, hitch up to KLEEN-STIK! These long-lasting, self-sticking labels *dominate* at the point of sale. Help move *more* of your products by harnessing the selling power of KLEEN-STIK—"work-horse" of effective labeling!




WE DO NO PRINTING—so contact your regular Label Printer. He can supply KLEEN-STIK Labels in roll-dispensed or individual split-back style.




PRODUCT AND PACKAGE LABELS | NAMEPLATE LABELS | INSTRUCTION LABELS | CAUTION LABELS | PRICE MARKER LABELS

**KLEEN-STIK Products, Inc.**
7300 WEST WILSON AVENUE • CHICAGO 31, ILLINOIS
*Pioneers in Pressure-Sensitives for Advertising and Labeling*

Write today on your letterhead for free samples of outstanding KLEEN-STIK labels.

# Glamour attracts attention!

• • • and you can attract attention to your food products by giving them the glamour of full-color wrappers featuring Taste Excitement! Taste Excitement is the properly balanced use of color, brand identification and mouthwatering, full-color serving suggestions. It gives the familiar, everyday food product a "package personality" that *stands out* and *sells* on crowded supermarket shelves.

But modern package design is a science that requires highly specialized knowledge and experience. Call on Western-Waxide to put the sales-boosting glamour of Taste Excitement on package designs for your food products, or consult a qualified independent package design expert.

*Increased Sales*
*... by Design!*

## CROWN ZELLERBACH CORPORATION

**WESTERN-WAXIDE SPECIALTY PACKAGING DIVISION**

PLANTS AND SALES OFFICES: SAN LEANDRO AND LOS ANGELES, CALIFORNIA • NORTH PORTLAND, OREGON • ST. LOUIS AND KANSAS CITY, MISSOURI
SALES SERVICE OFFICES: Akron • Atlanta • Chicago • Cincinnati • Dallas • Denver • Memphis • New York City • Omaha • Salt Lake City • Spokane • Seattle

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# Full line of pruning shears "sees the light" through sparkling windows of MYLAR®

**"We were seeking** an effective selling package for our complete line of pruning shears. We wanted protection and, at the same time, wanted the shears to be seen. Du Pont 'Mylar' solved our problem," reports J. Wiss & Sons, Inc., Newark, N. J. "Because of its clarity and high tear strength, 'Mylar' makes a perfect window material for an otherwise hard-to-package item."

The new Wiss carton is another example of how Du Pont "Mylar" polyester film has made possible a large window where none was practical before. Combining high tear resistance, impact strength, and amazing durability, "Mylar" gives lasting transparent protection and improved sales appeal to a wide variety of products.

Only windows of Du Pont "Mylar" offer all of these advantages:

- **Vivid clarity**
- **High tensile and impact strength**
- **Extremely long life**
- **Stability . . . won't shrink or warp carton**

For more information on the packaging applications of "Mylar" see your box maker or call in your Du Pont representative. If you prefer, mail coupon.

*MYLAR *is Du Pont's registered trademark for its brand of polyester film.*

DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

DU PONT
MYLAR®
POLYESTER FILM

E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Room MP-4, Wilmington 98, Delaware

Please send me information on "Mylar" polyester film for window boxes.

Name_____

Firm_____

Address_____

City_____ State_____

# Nothing sells your product like a transparent package

*...and cellophane is the most*

**MERCHANDISING APPEAL**—Versatile Du Pont cellophane works two ways to sell the Brownie Baking Co. line of quality cookies. First, cellophane's adaptability to fractional packaging permits this Spokane firm to meet consumer demand for convenience units. Second, thanks to cellophane's sparkling transparency, each cookie sells itself—the package shows customers what they want to see.

Candy, dried fruits, crib sheets, stainless-steel tableware—you can give almost any product a selling edge with versatile Du Pont cellophane. Its gleam and sparkle make products stand out. Its crystal-clear transparency shows all the quality. And customers know they can count on cellophane to protect product freshness.

You'll find cellophane economical to use, too. No other transparent material handles as efficiently on machines, gives you faster packaging. Now's the time to contact your Du Pont representative or converter of Du Pont films. He'll show you how a package made of Du Pont cellophane can help you sell better in today's competitive market. E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Delaware.

• • •

**SPECIFY DU PONT** cellophane by code designation when you order. Du Pont manufactures over 100 varieties of cellophane film to meet particular packaging needs.

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING...*THROUGH CHEMISTRY*

## *versatile transparent film you can use*

**Only cellophane gives you this balanced combination of advantages**

**CORRECT PROTECTION**—To protect its line of dried fruit against sugaring, Rosenberg Brothers, San Francisco, uses Du Pont K-type cellophane—one of many types tailor-made by Du Pont to meet specific protection requirements.

**HIGH-SPEED PRODUCTION**—Letty Lane Co., Inc., Westville, N. J., sells hundreds of thousands of cellophane packages of delicious candy weekly . . . Volume producers know that cellophane outperforms all other transparent materials on high-speed machinery.

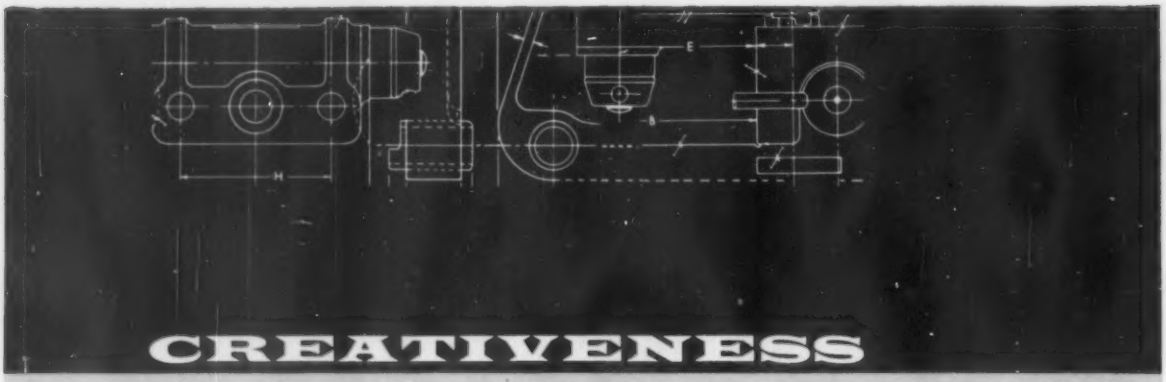
**EXCELLENT PRINTABILITY**—"Animal Party" crib sheets of Red Star Nursery Products show how color printing on cellophane gives a brand distinctive beauty. Brilliant color effects are easy to achieve on sparkling, easy-to-print cellophane.

**SPARKLING TRANSPARENCY**—International Silver Co., Meriden, Conn., finds sparkling cellophane the perfect showcase for its gleaming stainless-steel tableware—as testified by rising sales in supermarkets and variety chains.

**DU PONT cellophane**

*. . . leading the packaging field for 33 years*
*. . . designed for the needs of the future*

RENOSEAL



# CREATIVENESS

## THE REASON FOR SUCCESS

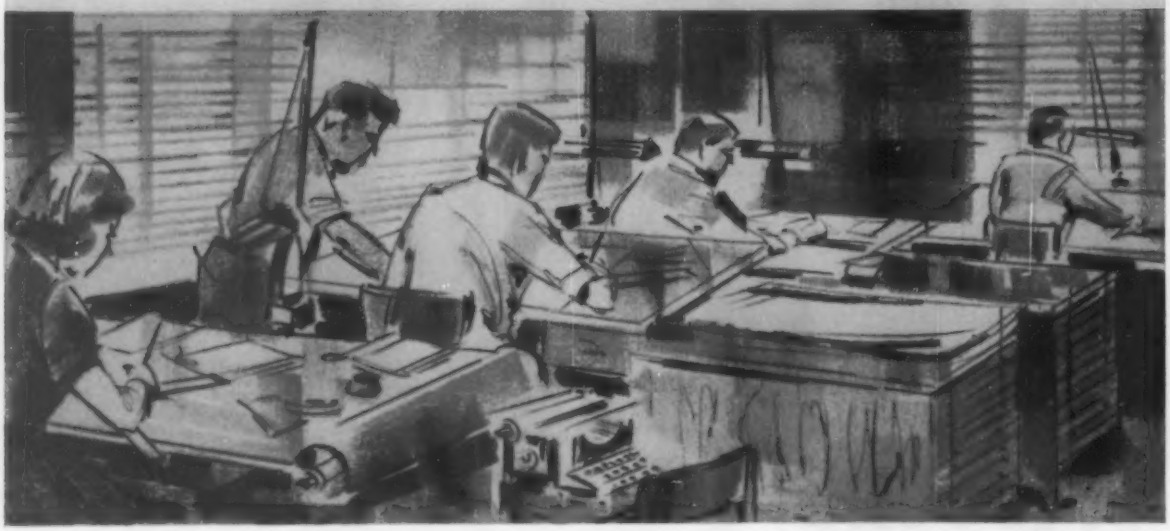
**Ivers-Lee is basically a creative organization.**

For 38 years we have been creating Unit-Packages to meet the specific demands of each individual product and customer . . . and, in turn, designing and building the machines which make these Unit-Packages. In fact, we have seven men in our Engineering Department whose function it is to design new machines and forty men in our Machine Shop to make the machines after they are designed and approved.

The success of Ivers-Lee is directly attributable to the fresh approach each Unit-Packaging problem receives . . . plus the fact that each added year of experience contributes to our knowledge, skills and creative abilities.

IVERS LEE CO.

**Ivers-Lee is the creator and Contract Packager of Super-Sealtite, the Catchcover, the Tab Pak and a thousand and one other unusual packages for sampling and distributing single or multiple doses of tablets, capsules, powders, creams and liquid Dropettes.**



cellophane

*...designed for the needs of the future*

# BENCOSEAL

## a shimmering foil dress for your product

Proud of your product? Of course! You've spent a lot of time, money and thought making it the very best. So dress it up in the very best foil overwrap—Bencoseal. Here's an overwrap whose beauty is more than skin deep; it has two inner tissues and a wax bond that gives wonderful extra protection. You get something else, too. Each Bencoseal wrap comes with Shellmar-Betner quality printing, sparkling, colorful printing that puts a gleam in the customers' eye. How about our getting together—now?

**TMP*—*the new science of salesmanship in packaging***

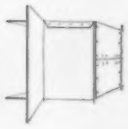
TMP* means "Tailor-Made Packaging"—the kind that strikes the eye, makes customers buy. Whether it's film, foil or paper, we create packages with built-in sales appeal. You'll sell your products best, with TMP.

**CONTINENTAL CAN COMPANY**

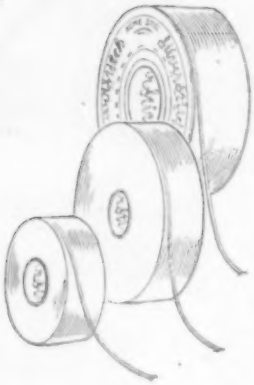
SHELLMAR-BETNER DIVISION

QUALITY PRINTERS AND CONVERTERS OF FLEXIBLE PACKAGING MATERIALS

# CLOSURE IDEA BULLETIN



## For Users of Fibreboard Boxes

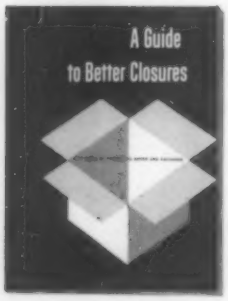


The larger coils of Acme Steel Stitching Wire allow longer continuous-stitching runs. Using 25 or 50-pound coils instead of 10-pound coils increases box closure production by cutting reloading downtime--simplifies inventory and stock handling, too.

Acme Steel makes holders for 25 or 50-pound wire coils. The positive brake action on these holders eliminates wire tangling, insures smooth feeding and braking. The Model P2B Holder holds either 10 or 25-pound wire coils. When used with the 25-pound coil, it dispenses up to 50,000 continuous stitches.

With the Acme Steel Model P1A0 Coil Holder, you can drive 100,000 stitches with only one brief threading stop. This holder holds two 50-pound wire coils. Wire feeds from the first coil while the second is ready for instant threading into the stitcher.

Acme Steel Colorstitch Wire adds to the sales appeal of your packages. Matching or contrasting the color design of the box with Colorstitch makes shelf-displayed goods more sales attractive. Colorstitch is available in ten chip-resisting, vinyl paint colors.




The box closure handbook, "A Guide To Better Closures" will provide a background for making basic decisions on box closure methods. It discusses the common box closure methods in a factual, easy-to-read style.

Your Acme Idea Man is thoroughly experienced in fibreboard box closure. And, his closure know-how is backed by the 75 years Acme Steel has helped industry solve closure problems.

Write to Dept. MDW-47, Acme Steel Products Division, Acme Steel Company, Chicago 27, Illinois.

ACME STEEL **WIRE STITCHING**

You'll sell your products best, with TMP.

# Before You Make Your Next Packaging Decision

# . . . Send for This Free "Management Tool Box"

Once you've seen the METAL EDGE "Management Tool Box", you may never think of packaging as "boxes" again—but as a cost-cutting means to simplified inventory control, accelerated production flow, better product protection, increased company prestige and greater distribution and sales.

Three booklets in the "Tool Box" explain the METAL EDGE METHOD—a unique *engineered* approach to packaging, materials handling and inventory control. You'll learn how it establishes product recognition and helps build sales, and integrates storage and parts handling, production flow and inventory into a *single* system—that eliminates duplicate effort and cuts costs and time all down the line.

Of interest to your sales, advertising, purchasing, engineering and production personnel, the "Tool Box" may give you a new conception of what packaging can do for your company. Send for your free "Management Tool Box". Just fill in and return the coupon below—*before you make your next packaging decision.*

**NATIONAL METAL EDGE BOX COMPANY**

*Packaging, Materials Handling, Inventory Control Engineered To Specific Needs in Over 100 Industries.*

1212 Callowhill Street
Philadelphia 23, Pa.

**National Metal Edge Box Company**
**1212 Callowhill St., Philadelphia 23, Pa.**

Gentlemen:
Please send me your "Management Tool Box". I understand there is no cost or obligation.

Name_____

Position_____

Company_____

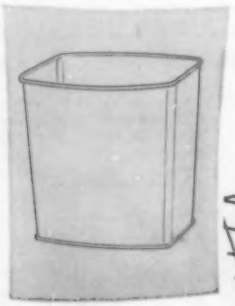
Address_____

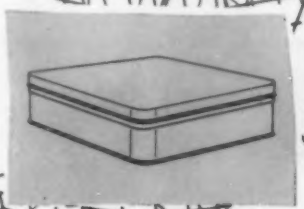
City_____ Zone_____ State_____

# The Eyes Have It..

## THE EYES THAT BUY YOUR PRODUCT

WHATEVER goes into a metal can . . . from beer to beans . . . pears to pretzels . . . soaps to soups . . . it is best sold with Heekin Product Planned Cans. The end result of your efforts may be a perfectly produced product, an economically produced product . . . in the right size package to please prospective customers, BUT . . . your product must still sell *right off the shelf*. Buy appeal is eye appeal . . . especially the first sale. Get the advice of experts at Heekin . . . benefit from Heekin's fifty-six years of packaging experience. You'll like Heekin Personal Service.





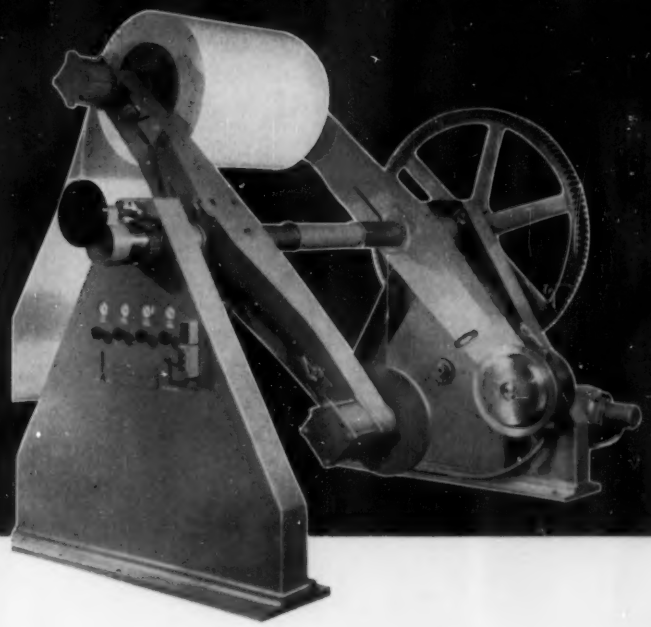
HEEKIN
*Product Planned*
CANS

**THE HEEKIN CAN CO.** *PLANTS IN OHIO, TENNESSEE & ARKANSAS—SALES OFFICES; CINCINNATI, OHIO; SPRINGDALE, ARKANSAS*

SINCE 1933
*A Symbol of fine* CRAFTSMANSHIP

MERCURY MACHINES—PACE SETTERS FOR THE FOLDING CARTON INDUSTRY

The most VASTLY IMPROVED STOCK ROLL UNIT on the market today!



INTRODUCING the new

*Mercury*

MARK A-3

**STOCK ROLL UNIT**

Double station . . . turnover shaftless . . . 84" diameter paperboard type.

**MAXIMUM Roll Diameter: 84 inches**

- Equipped with heavy duty aircraft-type disc brakes actuated by air cylinders. Pressure regulators and gauges control and indicate the amount of braking effort.
- May be adjusted quickly to handle any roll width within range. Transverse adjustment of 4" each side of center can be operated while running.
- Rolls are held in position by compressed-air actuated chucks to prevent roll becoming loose while unwinding . . . core chucks are changeable to accommodate any size from 4" to 20".

Phone, write or telegraph for complete details on Mercury MARK A-3.

*Profit Producing Machinery for Paper Converters*

MERCURY
ENGINEERING CORPORATION
2100 N. Farwell Avenue • Milwaukee 2, Wis., U. S. A.

*No Stapling, Gluing or Taping*

**NEW**

# PRESSEAL®

*Cartons Seal Themselves!*

New PRESSEAL® carton edges are factory-treated with a special dry-to-touch adhesive that fuses when corners are closed firmly.

**① Press down corners — carton seals**

No taping machines, no staplers, no messy glue. Simply close corners and press down firmly. No machinery needed.

**② PRESSEAL® cartons seal securely**

Just close the corners and stack cartons for shipping. PRESSEAL cartons are safely sealed . . . will not break open during shipment.

**③ After arrival . . . cartons open easily**

Just pull. No torn nails or scratched hands. No merchandise damage from cutting. A brisk tug opens the carton.

# PRESSEAL®

*cartons with the magic seal*
*Save space! Save time! Save work!*

**An exclusive development of**

## GROWERS CONTAINER CORPORATION

PLANTS IN SALINAS AND FULLERTON, CALIFORNIA AND JACKSONVILLE, FLORIDA

HEADQUARTERS in SALINAS, CALIFORNIA • SALES OFFICES — CALIFORNIA: Salinas, Fullerton, San Francisco, Los Angeles, Santa Rosa, San Jose, El Centro, Fresno
FLORIDA: Jacksonville, Orlando, Tampa, Lake Wales, Miami Springs • ARIZONA: Phoenix • ALABAMA: Birmingham • SOUTH CAROLINA: Greenville • GEORGIA: Atlanta

# These goods sell on sight . . .

in CELLOPHANE*

B.C.L.
in POLYTHENE

in ACETATE

## BRITISH CELLOPHANE LIMITED

SPECIALISTS IN FLEXIBLE TRANSPARENT PACKAGING MATERIALS

Commercial Office:- 12-13, CONDUIT STREET, LONDON, W.1. ENGLAND

*CELLOPHANE is the registered trade mark of British Cellophane Limited, in the following countries: Great Britain, Australia, Ceylon, Cyprus, Denmark, Eire, Gibraltar, Hong Kong, Iceland, India, Jamaica, New Zealand, Pakistan, Northern Rhodesia, Southern Rhodesia, Trinidad and Tobago, and the Union of S. Africa*

# STOP and THINK

*. . . and you'll buy*

## Taber

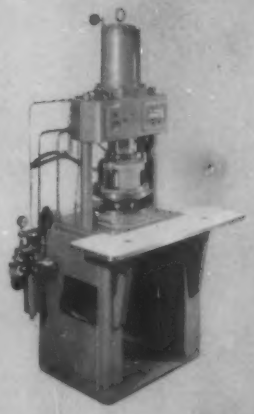
**SHEET PLASTIC FABRICATING EQUIPMENT**

### SAVE LABOR! SAVE MATERIAL!

If you're buying plastic fabricating equipment . . . STOP and THINK about one thing: Which equipment will produce FASTER and create FEWER REJECTS? Precision engineered TABER equipment cuts rejects to a minimum to save you plenty on material and TABER'S HIGHER SPEEDS and many exclusive AUTOMATIC features combine to cut your labor costs. So . . . STOP and THINK! Get the facts about TABER!

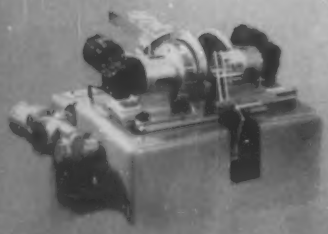
**8" AUTO-SIZE CYLINDER FABRICATOR, MODEL 138**

Cements, forms and seals lap-jointed cylinders from 1½" to 8½" in diameter and 1" up to 10" long. A first operation machine for making accurate, uniform cylinders that can be immediately fed into the model 147 Automatic Cylinder Beader.



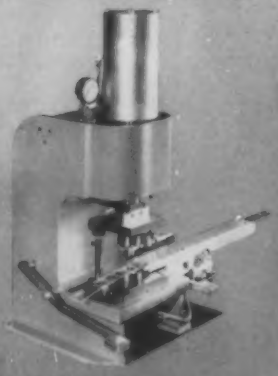
**8" THERMATIC DRAWPRESS, MODEL 146**

Pneumatic powered and electrically heated press, for drawing and trimming in one fast operation, round or oval transparent box covers. Dies designed and built in our "Tool and Die Division" for parts up to 8½" maximum dimension.



**8" THERMATIC CYLINDER BEADER, MODEL 147**

For beading both ends of lap-jointed cylinders in one automatic operation. Designed to bead cylinders of accurate diameters made on the model 138 Cylinder Fabricator. Cylinder sizes range from 1½" to 8½" in diameter and 1½" to 15" long.



**2½" PLASTIC FORMING AND DRAWING PRESS**

Pneumatic powered press for drawing, forming, embossing or marking sheet plastic parts up to approximately 2½" in diameter.

*. . . Write for Illustrated Literature . . .*

**TABER INSTRUMENT CORPORATION**

Section 12

111 GOUNDRY ST. • N. TONAWANDA, N. Y.

**Taber also produces:**

- 30" Thermatic Folder, Model 178
- 18" Thermofolder, Model 103
- Duplex Straight Edger, Model 144-2
- Continuous Type Folder, Model 172
- 30" Thermocreaser
- Single Straight Edger

Taber ®

New Zealand, Pakistan, Northern Rhodesia, Southern Rhodesia, Trinidad and Tobago, and the Union of S. Africa

everything you sell
deserves the protection of

WAXED
GLASSINE

Best billboard sales-wrap for your packaging dollar!

# More Sales Power Per Package ...with Waxed Glassine

*Ranks first with packagers for printing flexibility, color realism, better sealing, perfect product protection! This sales-wrap flags them all—from bargain hunters to shoppers who want the best!*

## THE POWER OF WAXED GLASSINE OUTER WRAPS:

- **More eye appeal**—Sparkling surface provides perfect background for brilliant, appetizing illustrations, lets you use entire package for powerful all-over sales-winning designs that prompt purchase!
- **Billboards your brand**—Every package is a *billboard* generating impulse sales and assuring repeat customers with its fresh, inviting look, strong appetite appeal and stand-out brand identification!

## INNER AND OUTER WRAPS OF WAXED GLASSINE:

- **Extra flavor protection**—Safely seals in all that desirable just-made goodness, keeps customers coming back for more.
- **Extra freshness protection**—Self-sealing Waxed Glassine protects against moisture invasion, maintains freshness and texture best for longer shelf and pantry life. Easier to open, easier to reclose, contents keep fresh and tasty!
- **Extra grease protection**—Waxed Glassine wrappers resist penetration by fats, oils, shortenings. No more rancidity problems! Package stays clean, inviting, colorful!
- **Extra strength**—Waxed Glassine passes rugged test of delivery in-store and consumer handling! Made stronger to stack better, it cuts down crumbling, breakage, ripped wrappers and returns!
- **Low cost**—Lower basic costs plus constant, dependable supply combine to produce an economical package that reaches out and sells!

Waxed Glassine teams up with the experience, facilities and service of the nation's top converters, to give you modern packaging and product protection that pays off in bigger packaging business—and the job doesn't stop here!

Traffic-stopping *designs*, actual *samples*, proven *sales ideas*, complete *cost sheets* show how Waxed Glassine pays off in better packaging, higher brand profits! See your Waxed Paper salesman, or write or telephone us direct.

W
PROTECTS FRESHNESS AND FLAVOR
P

WAXED PAPER MERCHANDISING COUNCIL, INC. • *38 South Dearborn St. • Chicago 3, Ill. • Telephone: STate 2-8115*

Baby Playthings

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Containers & Packaging

# Symbols of your potential through Tupper Corporation

Premiums

Do-It-Yourself Materials

● Whatever your custom needs in plastics manufacturing, call on Tupper's wide experience and modern manufacturing facilities. Our large, up-to-date plants, equipped with the best production machinery, are available for materials, injection molding, extruding, vacuum forming, blow molding—and other advanced processes.

The Tupper Engineering Department has developed the greatest number of patents in the industry for polyethylene seals, closures, and dispensers—and other items in other plastics. This know-how can be tapped by you to place your plastic products in a position of leadership.

Tupper seals and other Tupper products are protected against unauthorized manufacture by about 150 U. S. and foreign patents and patents applied for, plus numerous trademarks and copyrights.

TUPPER CORPORATION

TUPPER! Trade-mark

*Manufacturers of:* CONSUMER, INDUSTRIAL, PACKAGING and SCIENTIFIC PRODUCTS

*Factories, Laboratories and Sales Offices:*
Massachusetts, Rhode Island, Florida, Montreal, New York

Address correspondence to:

Dept. MP-4
Tupper Corporation
Woonsocket, R. I.

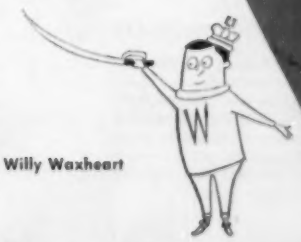
or

Dept. MP-4
Tupper Corporation
225 Fifth Ave., N.Y.C.

# A little wax can make a package lots better

. . . because wax **(1)** safely seals in freshness and flavor, **(2)** seals out moisture, **(3)** resists grease and contaminants, and **(4)** gives packages extra strength to withstand rough handling.

You can easily "build" one or all of these qualities into boxes, wrappers, containers, bottle caps and adhesive tapes. Call on Warwick Wax—the company with the broadest selection of specialty waxes. Warwick samples, suggested formulations and technical services are available *free of charge*. And Warwick's 33 stocking and service centers assure you of deliveries without delay.




**Get your wax facts from Willy Waxheart —ask for booklet WW1.**

Sun

**Warwick Wax Company**
A DIVISION OF
**Sun Chemical Corporation**
10th Street & 44th Avenue, Long Island City 1, N. Y.
STillwell 6-1100
Midwest Office: 6556 S. Melvina Ave., Chicago 38, Ill.
LUdlow 5-5700

DIVISIONS OF SUN CHEMICAL CORPORATION
HORN (paints, maintenance and construction materials, industrial coatings) • WARWICK (textile and industrial chemicals) • WARWICK WAX (refiners of specialty waxes) • RUTHERFORD (lithographic equipment) • SUN SUPPLY (lithographic supplies) • GENERAL PRINTING INK (Sigmund Ullman • Fuchs & Lang • Eagle • American • Kelly • Chemical Color & Supply Inks) • MORRILL (news inks) • ELECTRO-TECHNICAL PRODUCTS (coatings & plastics) • PIGMENTS DIVISION (pigments for paints, plastics, printing inks of all kinds) • OVERSEAS DIVISION (export) • A. C. HORN COMPANY LIMITED (Canada) • GENERAL PRINTING INK CORPORATION OF CANADA, LIMITED • FUCHS & LANG de MEXICO, S. A. de C. V.

Do-It-Yourself Materials

Dept. MP-4
Tupper Corporation
Woonsocket, R. I.

or

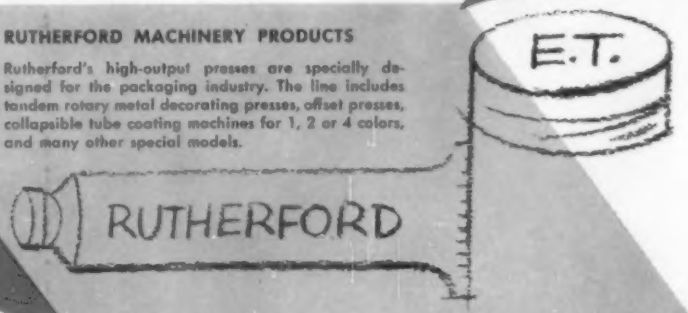
Dept. MP-4
Tupper Corporation
225 Fifth Ave., N.Y.C.

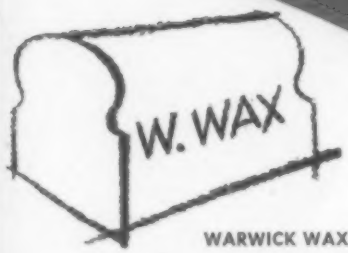
**GENERAL PRINTING INK PRODUCTS**

Need flexographic, metal decorating, Hydry moisture-set, or any other kind of ink? GPI offers you these famous brands—American, Eagle, Fuchs & Lang, Kelly, Chemical Color & Supply Inks, Sigmund Ullman—for printing on paper, plastic, fiber, board, metal or glass.

**RUTHERFORD MACHINERY PRODUCTS**

Rutherford's high-output presses are specially designed for the packaging industry. The line includes tandem rotary metal decorating presses, offset presses, collapsible tube coating machines for 1, 2 or 4 colors, and many other special models.



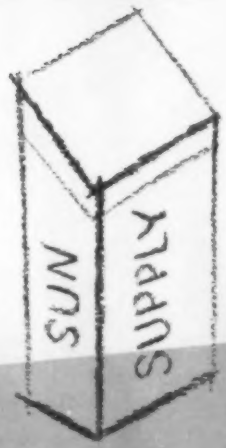




**WARWICK WAX PRODUCTS**

Do your packaging problems include wax coatings on paper, board or food itself? Warwick offers you the broadest selection of waxes available—including vegetable, crystalline, micro-crystalline, and emulsifiable petroleum waxes of many types.

**A. C. HORN PRODUCTS**

Printing on drums, cans, toys, trays or even flashlight batteries? A. C. Horn can supply you with colorful, metal-decorating coatings that are fast-drying, color-fast, and economical.




**SUN SUPPLY PRODUCTS**

Speed up pressroom operations! Sun's Coppertone Offset Blanket is hard but resilient, cured to its finished thickness of 0.065"—perfect for clean, sharp impressions on conventional offset as well as metal decorating presses. *Shur-Kleen*, the 1-step washup, cleans rollers and blankets faster and better than straight solvent types of wash.

ELECTRO-TECHNICAL PRODUCTS
Need special or standard bottle cap liners? Electro-Tech can fill your requirements promptly and economically—because of its extensive experience in developing coatings and plastics.
Sun

# new

## Sun Service for the packaging industry

Need fast-drying, odorless inks, emulsifiable petroleum waxes, or collapsible tube coating machines? One of Sun's divisions can fill your packaging needs . . . with a complete line of inks, paints, waxes, special purpose presses, and pressroom supplies. Each division offers you expert technical assistance—that is broadened by constant, intensive cooperation between all divisions.

For help with your specific problem, call the nearest Sun Chemical office or write direct.

**Sun Chemical Corporation**
10th Street and 44th Avenue, Long Island City 1, N. Y.

DIVISIONS OF SUN CHEMICAL CORPORATION
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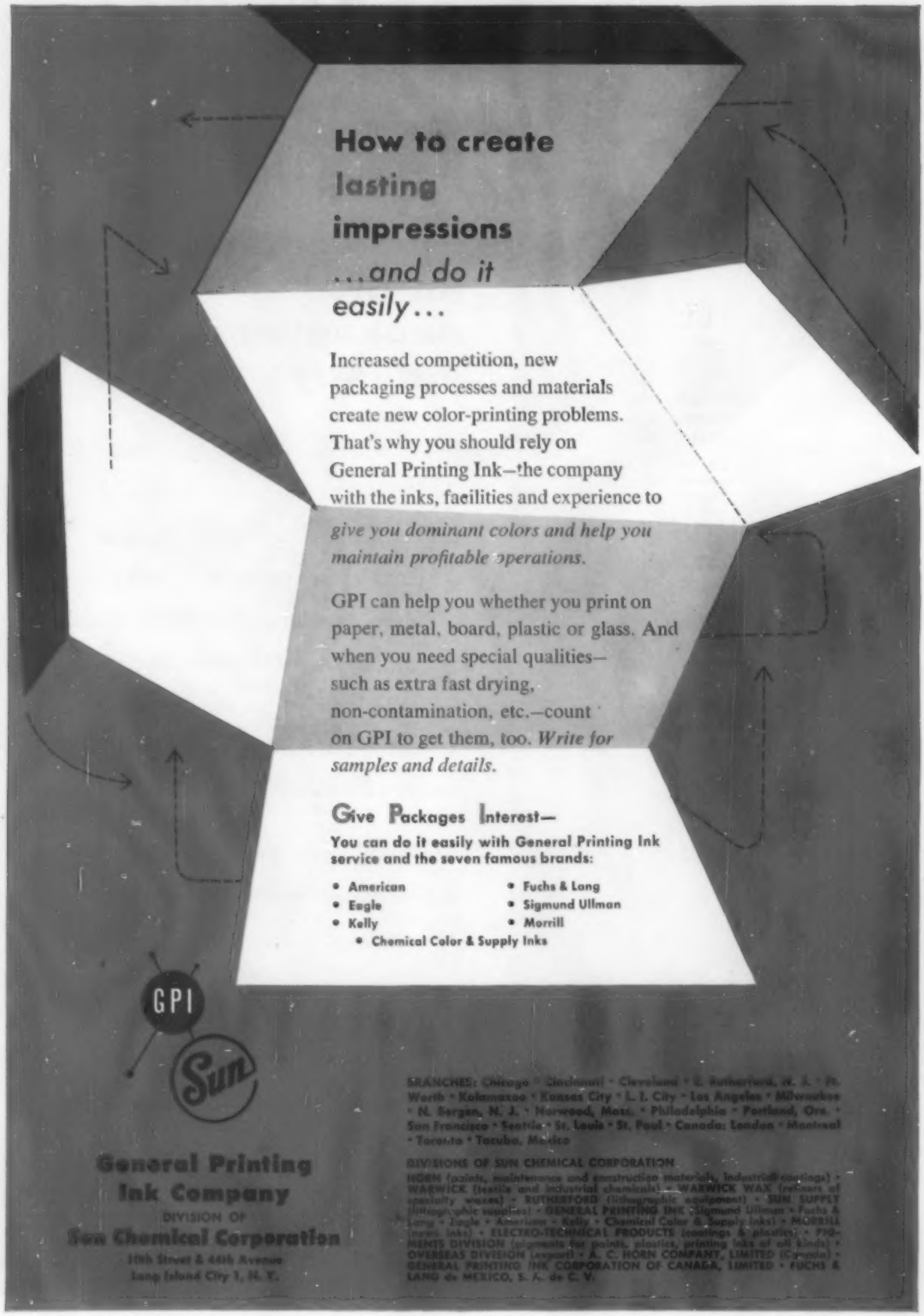

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Increased competition, new packaging processes and materials create new color-printing problems. That's why you should rely on General Printing Ink—the company with the inks, facilities and experience to *give you dominant colors and help you maintain profitable operations.*

GPI can help you whether you print on paper, metal, board, plastic or glass. And when you need special qualities—such as extra fast drying, non-contamination, etc.—count on GPI to get them, too. *Write for samples and details.*

## Give Packages Interest—

**You can do it easily with General Printing Ink service and the seven famous brands:**

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# FORMVAC ROLLFORM 1957

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## FASTEST AUTOMATION PACKAGE MANUFACTURE WITH UNPARALLELED ADVANTAGES

- Airslip's biaxial orientation of sheet gives outstanding strength to containers, allows thinner gauges to be used
- Absolutely perfect gauge distribution throughout, also in deepest containers, regardless of shape
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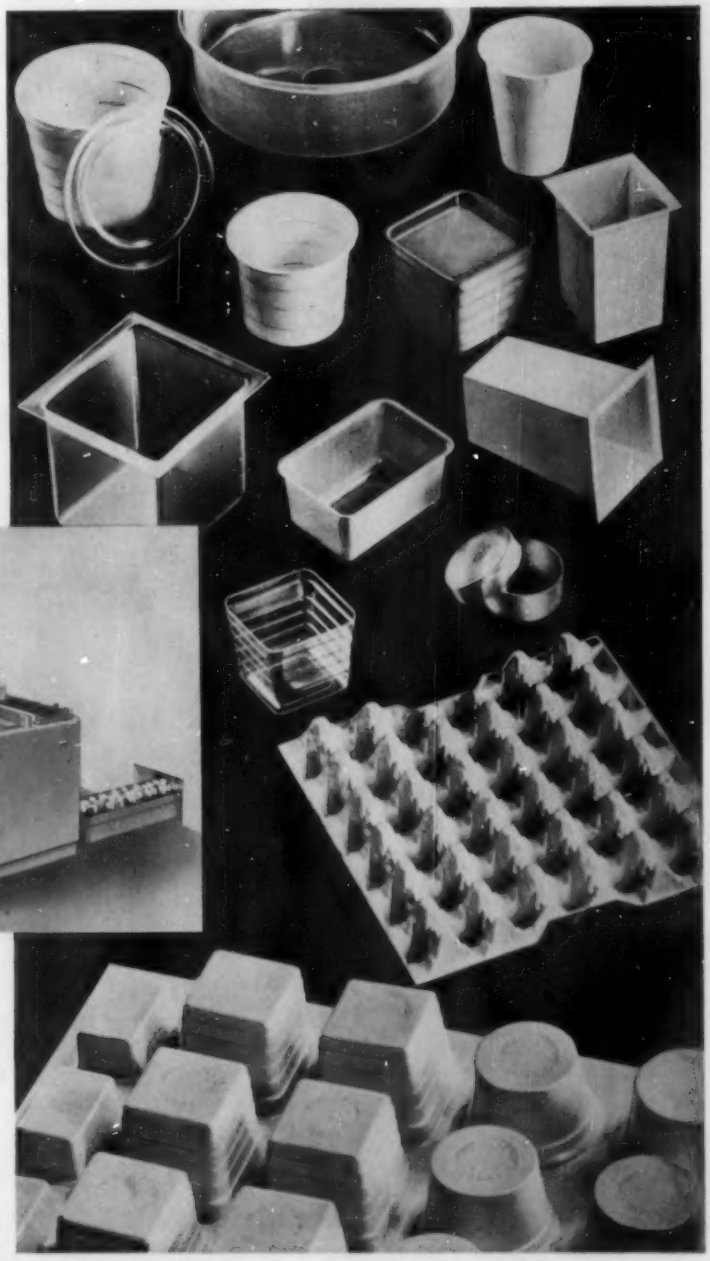
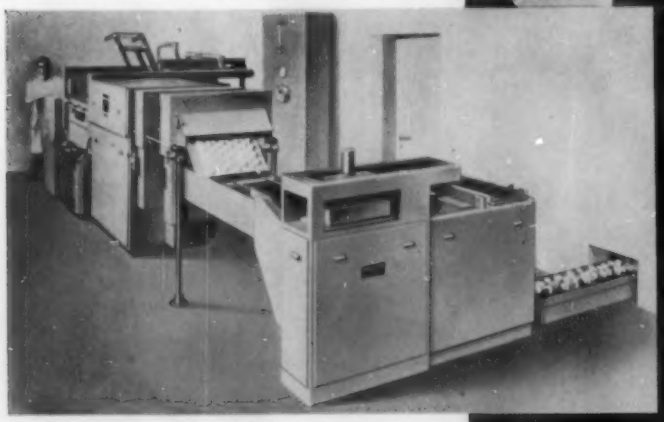
- In-line Formvac Planetary Trimmer enables containers and lids of any shape, with straight or rolled-over edges, to be trimmed cleanly





"Formvac Rollform" automation line producing round plastic boxes 2½" in diameter, 2" deep, 0.006" wall thickness, from high-impact polystyrene at a rate of 240 per minute. Beyond replacing the roll of sheet every 6-8 hours, no human intervention required. Finished boxes automatically ejected onto conveyor belt.

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# Sterling Supreme & Trojan Imperial gummed tapes stick faster and stick to stay

BECAUSE they are flexible and pliable, they are easier and less tiring to use. The results are more boxes closed per hour with less effort. The strength of top quality kraft and the tenacity of a perfect glue are combined in every tape . . . right down the line.

Besides the super-standard Sterling Supreme and the popularly priced Trojan Imperial sealing tapes, the Gummed Products Company offers a complete selection of special purpose tapes. Ask the paper merchant who distributes Sterling or Trojan in your locality about them. He's your dependable source of supply for all your paper and gummed tape requirements.

**The Gummed Products Company**

Troy, Ohio • Subsidiary of **St. Regis Paper Company**

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CHIPPEWA PLASTICS, INC.

CHIPPEWA FALLS • WISCONSIN

*Now—Specify FAIRLON by Chippewa*

A new, distinctive packaging material—Far Clearer, Far Stronger!

Highest gloss polyethylene available. Puts life and sparkle in your package. Truly today's greatest advancement for Modern Packaging. Shows all of your product and permits it to keep that "fresh-from-factory" look!

FAIRLON by Chippewa combines both clarity and strength, prime assets to you in merchandising your product. Chippewa Plastics does NOT manufacture polyethylene bags. Consult the convertor nearest you for this service, and when discussing your needs with him, specify bags made of FAIRLON to assure your product the finest in modern packaging. You cannot afford to overlook this newest advancement in better package merchandising.

- - - - - - - Clip and Mail this Coupon TODAY! - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Chippewa Plastics, Incorporated . . . Chippewa Falls, Wisconsin

Gentlemen:

☐ Please have your representative call.
☐ Please send data and samples of FAIRLON.
☐ Please send name of FAIRLON convertor nearest me.

Name_____
Firm_____
Address_____
City_____ State_____

. . . SPECIFY CLEARER, STRONGER FAIRLON

POLYETHYLENE PLASTICS BY CHIPPEWA

# For greater accuracy... lower costs *Sherman* Paper Products Corp. uses MOSSTYPE "D-MOUNT"® PRINTING CYLINDERS

**Featherweight "D-MOUNT" sleeve and interchangeable shaft...**

**shrink-fit together like finest integral-shaft plate rolls. Unvarying concentricity assured because assembly does not depend on troublesome adapters or wrenches . . . has no parts to wear, no threads to strip, no pins to break, no screws to jam.**

Patented

*75% lighter than steel!*

It takes a high degree of accuracy to achieve quality printing on Sherman Paper Products' line of corrugated and fluted packaging specialties. That's one good reason why Sherman uses MOSSTYPE "D-MOUNT" PRINTING CYLINDERS.

Over the years Sherman has used almost every type of conventional integral-shaft and demountable cylinder . . . yet "D-MOUNTS" have proved to be the most accurate of all. In fact, the positive concentricity of "D-MOUNT" CYLINDERS has enabled Sherman to discontinue costly, time-consuming "truing-up" operations before each run.

Sherman also likes "D-MOUNT" CYLINDERS because their lighter weight permits faster printing speeds . . . because their lower cost permits more jobs to be kept standing on them . . . because they take up less storage space too.

Get all the facts on "D-MOUNT" CYLINDERS now . . . including details of our no-risk trial plan.

## *MOSSTYPE "D-MOUNT" CYLINDERS*

- **Cost less than conventional shafted plate rolls . . . enable you to keep more jobs standing**
- **Assure positive concentricity always . . . shaft centers itself exactly in sleeve bore every time**
- **Lightweight . . . permit faster running speeds; easier to handle**
- **Require less space to store**

RUBBER PLATES MOSSTYPE® DESIGN ROLLERS

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# MOSSTYPE

150 Franklin Turnpike, Waldwick, N. J.

**Makers of . . .**

- **MOLDED RUBBER PRINTING PLATES**
- **CONTINUOUS DESIGN ROLLERS**
- **RUBBER PLATE MOUNTER-PROOFER MACHINES**

**A pioneer in the development of modern flexographic printing, MOSSTYPE is the largest maker of rubber plates in the world. Our fully-integrated organization includes complete art, pattern engraving, plate-molding, mounting and cylinder-making departments under the same roof . . . serves converters and package printers all over the globe. We will be glad to send informative literature about our services at your request.**

*It's slim . . . feminine . . . ideal for cosmetics!*

# *It's Canco's 8-oz. "Queen Size" pressure container!*

Any woman will appreciate this slim, graceful, easy-to-hold container. That's why it's perfect for cosmetics—hair sprays, lotions, creams and many others.

The "Queen Size" container is available with Canco's one-inch cup opening top, or an individually styled one-piece top. Either will accommodate a variety of valves and both are adaptable to all filling and closing equipment.

The Canco representative will gladly tell you more about this well-designed pressure container and others in Canco's line—the most complete line in the industry. Give him a call!

**How Canco saves you up to 35% on your packaging costs**

- Canco containers cost less initially, because they're mass-produced on standard can-making equipment.
- Canco offers all popular sizes: 3-oz., 4-oz., 6-oz., 8-oz., 12-oz., and 16-oz. Available with cup tops, *or with one-piece tops which simplify packing, cut costs.*
- Canco works directly with valve makers and contract loaders to give you the most efficient package at lowest cost.
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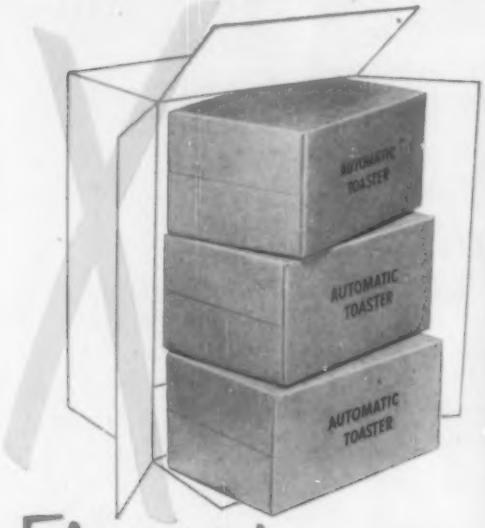
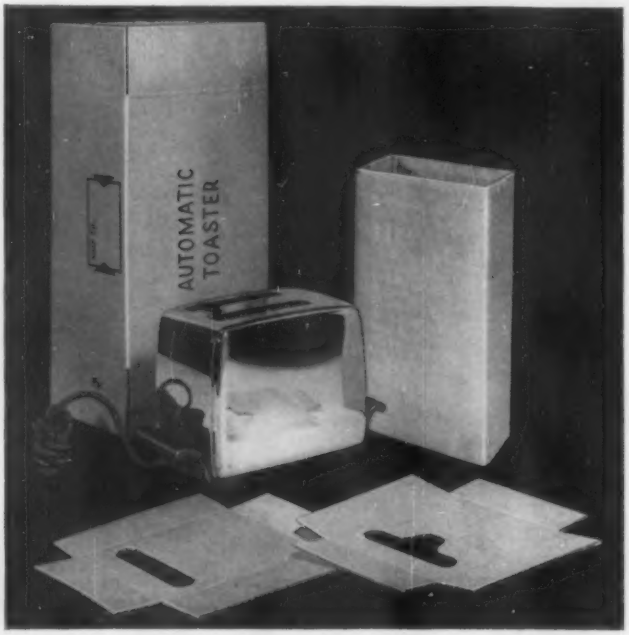
COME TO CANCO FIRST! *American Can Company* *New York · Chicago · San Francisco*

# HOW *Inland* DESIGN LEADERSHIP SAVES YOU MONEY




## *Eliminated...*

**A MASTER CARTON AND AN ENTIRE PACKING OPERATION!**




## by *Inland* engineering and *Inland* material

● Think what it meant for this manufacturer, annually shipping more than a million leading brand-name toasters, to save the entire cost of a master shipping carton and the labor cost of packing it. Inland's engineering skill made it possible!

Now, an inner sleeve of Inland's exclusive Air-Pak material literally floats each unit inside its individual container . . . assuring safe delivery and eliminating the need for a master carton.

This single-unit packaging provides another advantage . . . distributors have greater flexibility in filling individual dealer orders.

Your Inland package engineer is a *corrugated shipping container specialist.* When your product packaging is entrusted to him, you can be sure you are getting the benefit of every possible packaging economy applicable to your product.

*Inland Boxes Build Good Will*

Send for this booklet fully illustrating Inland's services, facilities and products.

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**INLAND CONTAINER CORPORATION**
INDIANAPOLIS 6, INDIANA

*Corrugated Fiber Boxes*

**MILLS:** Macon, Georgia; Rome, Georgia. **PLANTS AND SALES OFFICES:** Indianapolis, Indiana; Middletown, Ohio; Milwaukee, Wisconsin; Evansville, Indiana; Detroit, Michigan; Macon, Georgia; Erie, Pennsylvania; Ashtabula, Ohio; Orlando, Florida; Rome, Georgia; Biglerville, Pennsylvania.

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**New Kimble Opticlear Snap-Cap Vials** are light and sturdy, offer flawless visibility of your product, permit labeling on outside or inside.

**New Kimble Opticlear Snap-Cap Vials** are available in a complete range of sizes: 1, 2, 3, 4, 5, 7, 10 and 12 drams.

## Now! Showcase *your* dry products for extra profits in

## *SPARKLING KIMBLE OPTICLEAR SNAP-CAP VIALS*

**Speeds up packaging! Adds sales appeal! Offers greater convenience to your customers!**

Insure the sales success of your dry products: package them for maximum visibility and convenience in Kimble's sparkling Opticlear Snap-Cap Vials.

The new snap-cap, on or off with a flick of the thumb, speeds up packaging. The specially tooled neck and lip assure a snug-fitting cap, minimizing moisture-vapor transmission.

If you have a packaging problem, investigate the outstanding advantages of packaging your dry products in these economical glass containers. Mail the coupon today and we'll send you information, prices and samples of the sizes you use. Kimble Opticlear Snap-Cap Vials are made by the Kimble Glass Company, a subsidiary of Owens-Illinois.

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Sizes needed_____

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KIMBLE OPTICLEAR SNAP-CAP VIALS
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# INSTANT Identification...INSTANT Sales!

As the fight for attention by competitive products increases in fury, the victory often goes to the bold and the big.

Whether your carton is large or small, this billboard concept of package design can earn the quicker identification that accelerates the pace of sales, and profits.

May we investigate this with you? The representative who calls on you will be skilled and experienced—and backed by one of America's oldest, biggest carton manufacturing companies.

*Many of America's great products reach the consumer in "Cartons by Gardner"*

PLANTS: Middletown, Ohio; Lockland *(Cincinnati)*, Ohio; Springfield, Massachusetts *(Gardner-Brooks, Inc.)*
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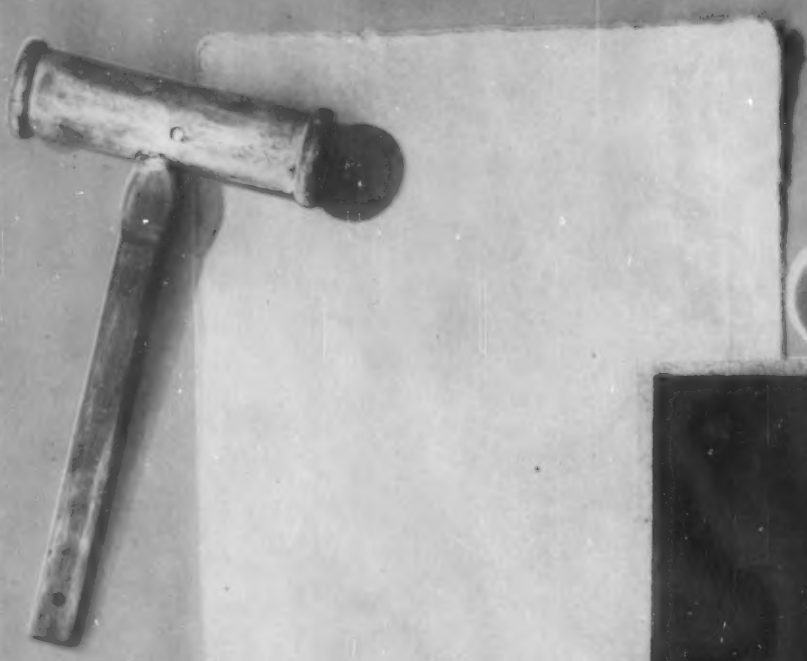
## THE GARDNER BOARD AND CARTON CO.

**Middletown, Ohio**

*Manufacturers of Folding Cartons and Boxboards*

FROM THE GARDNER GALLERY OF FAMOUS AMERICAN PACKAGES

# Paper Needs The "TOUCH OF TALENT"



Old Japanese paper, handmade from the inside bark of the mulberry tree in the 18th century, is beautiful but of negligible value without the touch of talent.

The talents of Sharaku, Japanese artist, converted simple paper into master prints, sought by museums everywhere. (Shown) Actor Ichikawa Ebizo IV, as a villain, 1794.

COURTESY: MUSEUM OF FINE ARTS, BOSTON

The value of a paper product depends upon the talent and skill applied in its making, whether a museum masterpiece, or a sales-appealing consumer package.

NASHUA PACKAGING TALENTS AVAILABLE TO YOU... Creative Design • Paper Chemistry • Package Engineering • Coordinated Packaging • Quality Production • Procurement Versatility

NASHUA Corporation

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MODERN PACKAGING
April 1957
Vol. 30, No. 8

# How to get rid of the 'handle'

*Compulsion to touch the product is a shopper characteristic that the best of packages can't always overcome. But damage can be minimized; here's how today's packagers are doing it*

PHOTO COURTESY DU PONT.

**Pre-packaging** answers produce packer's problem of reducing damage from the immutable shopping habit of pinching and poking. Similar techniques are spreading to all consumer-goods fields.

The irresistible desire to touch merchandise before purchase is as old as the custom of trading itself. The shopper simply must, it seems, feel the texture of a length of yardage, a piece of lace, a blouse, a shirt, a blanket, a baby toy, a piece of fragile china or a delicate novelty.

Instinctively, in the market place she fingers the vegetables and each piece of fruit to pick out the freshest and the ripest.

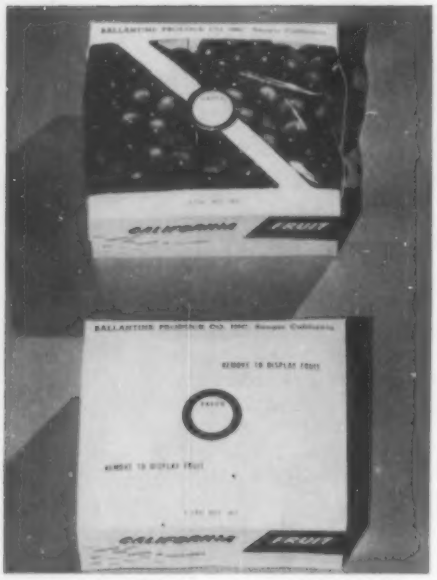
The classic remark attributed to an Italian fruit vender epitomizes the universal impulse: "If you must pincha de fruit, pincha de cocoanut."

Getting rid of the "handle" that causes the high percentage of damage and markdowns always has been one of the major problems of retailing. With the spread of self selection into every retail outlet, the need is becoming even more acute.

The package more than ever must protect merchandise from the handling it will get from thousands of shoppers wandering at will through self-service stores, picking up anything and everything to examine and evaluate before buying.

No longer is a clerk there to keep merchandise out of reach on shelves behind the counter or in glass showcases. Practically everything today must be on the counter where shoppers can get at it. In

Package Engineering • Coordinated Packaging • Quality Production • Procurement Versatility
Corporation




**Perishable grapes** are protected from shopper handling in folding cartons that give complete visibility of product when die-cut flaps, which are designed for greater strength during shipment and storage, are removed and the grapes are put on retail display. *Cartons by Marathon Corp.*

hundreds of instances, this means the package is the sole guardian of the product against the damaging handling.

From greeting cards to bananas, new packaging strategies, therefore, may well be studied by every packager who has the "let's-touch-it" psychology to combat.

Actually there are four basic packaging approaches to the problem which each packager must evaluate today in relation to the nature of his product and the shopping habits governing its sale:

1. Sealed packages that the shopper is encouraged to purchase by demonstration of an open sample on the counter.

2. Package designs that encourage shoppers to "look, but don't touch."

3. Constructions that actually give the shopper a chance to feel the goods without removal from the package.

4. Reclosable packages for items the customer insists on examining or wants to try on before purchase, such as sweaters, bras and girdles.

"See-through" packaging has already gone a long way in tempting the shopper by sight rather than touch. Hundreds of standard items are sold today in sealed film packages and window cartons. The majority of shoppers no longer question the purchase of household textiles, hosiery and socks, notions, infants' items, hardware and many other products in sealed packages. Visibility of product, plus open samples on the counter, informative labeling and aggressive brand promotions have inspired confidence that represses the primitive instinct to touch.

The Folding Paper Box Assn. estimates that 40% of all new folding boxes for consumer goods now feature some kind of "see-through" construction that combines sales appeal with product protection, encouraging shoppers to buy by sight—thereby helping to solve the long-standing retailer problem of markdowns due to shopwear. The largest share of new window cartons, it is pointed out, are for products previously sold loose, such as fresh produce, soft goods, hardware, housewares, toys, paper goods, even plant bulbs and Christmas-tree ornaments. The packages give the customer a chance to see what she buys without the need of handling it.

The same psychology is behind practically all transparent film packaging, which has become virtually indispensable to modern merchandising.

The sealed package, however, no matter how appealing, is not the answer in all cases apparently. Tomato and berry packaging, for instance, could be given more study to provide better "see-through" packages at low cost that eliminate complaints by customers that they cannot get a full view of the product and therefore are not sure of quality.

Sealed textile packages are also a cause for concern. Sales are lost, retailers say, if shoppers are not permitted to examine the texture of fabrics. And if packages have to be torn open to show the customer, the procedure results in markdowns anyway because, after examination, the shopper invariably asks for an unopened fresh package.

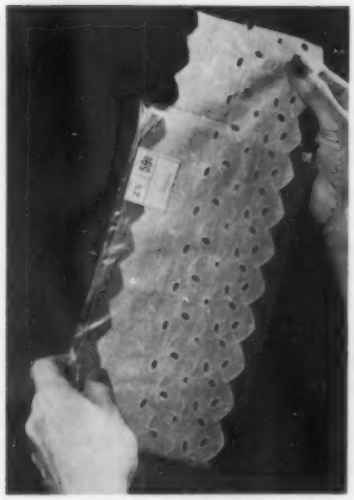
This situation is being rapidly overcome by some very interesting developments in packaging constructions. And the progress has been greatly aided by the tough, stretchable characteristics of economical polyethylene films.

Users looking for such packages will find that

**Thermoformed packaging** offers a dramatic new way to get rid of the handle. The Wilson Rubber Co. mounts Latex gloves in a piece of acetate contoured to the shape of a hand. The merchandise is locked in the package by a paperboard platform and a backer card that slides along tracks on each side of the acetate. Within a few months, sales were being counted in the hundreds of thousands. *Package by Plaxall, Inc.*

## Shopper can actually feel texture of contents in these packages

**Small aperture** in seal allows one corner of the material to extend outside the cellophane package of The Lempert Co.'s packaged dress lengths, so that the customer may examine the cloth.



**Free end of lace** extends beyond end of package for the shopper to examine, but polyethylene flap construction restrains the backer card so that the product is locked within the package. *Packages by M. Korn Packaging Co.*

many converters of film are now supplying polyethylene bags with patented construction which allow the lip of a bag to be flipped over in such a manner that it secures contents without the need of a seal. In this way, the shopper may reach in to touch the product.

Other bags are being designed with deliberate openings in the bag seam, either lengthwise or horizontal, for the same purpose. Some of the constructions are so effective that it is almost impossible to remove contents without destroying the bag—a step which most shoppers won't take.

The "reach-in" feature is accomplished in many cases by the design of the lip of the polyethylene bag, turned back either inside or outside the bag and sealed against itself at the side seams. With these constructions the product may be inserted, yet is always available for examination by reaching into the bag while the flipped-over flap holds the merchandise inside. Most items can actually be removed

**Slot in back seam** of this cellophane blouse package permits shopper to reach in to feel blouse fabric which shows through the clear outline area on face of the bag. *Bag by Milprint, Inc.*

**Flip-over cuff** on polyethylene gusset bag is designed to hold product securely, but customer can put her hand inside to examine shirt. Product can be removed without destroying bag, but most shoppers do not request it after examining material. *Bag by Bemis Bro. Bag Co.*

**Reclosable packages** are required for garments that customers often request to try on. This slide-sleeve carton is easy for removing and replacing Formfit girdle. Only finger pressure is needed to open and reclose the specially designed back flaps of the new Formfit bra carton. *Cartons designed by International Graphics, Inc., and made by the Ace Carton Co., using S. D. Warren Co.'s LusterBoard.*

or replaced without damage to the package, if desired, but experience shows that the shopper is usually satisfied without removing them.

Among the first reported successful users of this type of flip-over bag was Strutwear, Inc., of Minneapolis, which adopted it in 1953 for women's blouses and pajamas.[1] The polyethylene bag is made of a single piece of film folded against itself with welded lengthwise seams. The front panel is 3 in. longer than the back, folded down on itself and welded to the bag seams to make a flap with a turnover cuff.

When the cuff is reversed, it conceals the bag opening so that contents are held in place securely and can't slip out. Garments may be taken out and replaced, or they may be examined without removal by reaching in to feel the fabric.

The bags are easy to fill simply by holding them in an open position with the flip-cuff flap against the the front panel where it stays until the product has been inserted. The packer merely turns over the cuff and the product is locked in.

Today this construction is being licensed to a number of suppliers by the converter who developed it and its use has spread to products as diverse as men's shirts, sweaters, diaper covers and automobile seat covers.

A manufacturer of laces and embroideries sold widely in chain, department and variety stores in pre-cut packaged lengths has found a very ingenious method of giving the shopper a chance to touch the merchandise by means of the flap arrangement on polyethylene bags. When placed on a counter rack, each package has a few inches of lace or embroidery protruding outside the package so that the customer can feel it while the rest of contents are completely protected from shop handling.

The length of lace or embroidery is folded and stapled against a colored backer card with one end length wrapped around the card and allowed to extend a few inches beyond it. When the card with lace or embroidery is inserted in the bag, the bag flap retains the product while the end of the trimming is outside for the customer to examine. The method is so simple, yet so successful, it undoubtedly will be adopted widely in the trimming field, where the shortage of retail sales help is making it increasingly essential to sell in pre-cut, convenient, packaged lengths.

Because of the characteristics of cellophane, this material needs slightly different treatment to provide a package in which merchandise may be examined.

Princess Fair Blouses, Inc., received a first place in the cellophane-bag classification of the recent National Flexible Packaging Competition for its rotogravure-printed blouse package, designed with a photographic illustration of a girl in combination with a clear area of cellophane in the exact shape of a blouse through which the material may be seen. The back of this bag is left completely unprinted to show style features of the garment, except for printed black lines marking an opening in the back seam of the bag to provide an opportunity to feel the fabric. Otherwise the package is completely sealed.

The Lamport Co., Inc., New York, is solving the problem of allowing shoppers to feel the quality of

## Window cartons repress

**Visible colors** and patterns seen through transparent window make it unnecessary for the customer to open these Rubbermaid packages, which carry all essential information printed on carton surfaces. *Cartons by United Board & Carton Co.*

[1]See "Flip-Over Bag," MODERN PACKAGING, April, 1953, p. 142.

dress lengths for home sewing by the use of cellophane wraps, otherwise sealed, in which the fabric is so folded around its backing card that a tiny corner of the material is left outside the wrap. Trade identity is provided by a printed label inserted inside the clear cellophane, giving all essential information.

Packaging for items that shoppers prefer to try on before purchase require other closure techniques. Good examples are bras and girdles. When a shopper makes a first purchase of a certain brand, style and size of bra or girdle, she generally wants to try it on before purchase. A second purchase, if she has been satisfied, is usually accepted without try-on. With these shopping habits in mind, the Formfit Co. has redesigned the packages for its entire line of bras and girdles to provide reclosable features aimed at reducing damage and markdowns.

All of the packages are folding cartons of special constructions. For girdles, the company has adopted an attractive two-piece, slide-sleeve carton, easy to open and remove contents and just as easy for the salesperson to replace contents. There is no question of asking for a fresh package when the sale is made. The carton for bras has a special snap-open feature on the back, accomplished by die cutting the flaps so that only finger pressure is required to open or reclose the package.

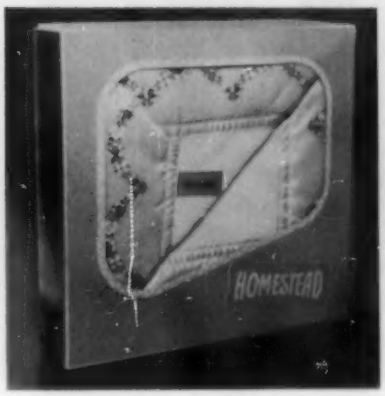
The big trend in merchandising today, of course, is to sell with a package that depends on vision rather than taction for appeal. Nevertheless, the study that is being given to constructions that permit the customer to feel as well as see indicates that there is still a prevalent need, particularly in textiles, for packages that give the shopper this opportunity.

**No handling necessary** to rumple the fur trim on this gift put-up of Prince Matchabelli perfume, dramatized in a frame-style carton placed in a transparent acetate sleeve. With product visible both front and back, the package is ideal for display. *Carton by The Warner Bros. Co.*

And the attention that is being given to packaging generally to eliminate ruinous handling of merchandise is an indication of the importance that must be attached to this phase of package planning today. Manufacturers who are recognizing these problems with the right package constructions are, indeed, helping retailers in their unending effort to cut operating costs and speed the sale with packages that take immutable shopping habits of the customer into consideration.

## the touching instinct

**Pictorial illustration** plus planting directions on carton give shopper essential information, while quality of bulbs may be seen through the transparent window of these Springtime Bulb Farm packages. The new packages have reduced damage immensely over the former method of bulk selling. *Cartons by Gardner Board & Carton Co.*




**Blanket style** is immediately apparent in this window carton for Homestead blankets by Fuld Bros. which invites inspection, but reduces the handling hazard. *Carton by National Folding Box Co.*

**Funnel-loading method** developed by Albers for packaging lettuce in new light-weight, twist-tight polyethylene film is achieved by sliding opened bag up over funnel fingers, holding bottom with one hand while the other drops lettuce in.

PHOTOS COURTESY THE DOUGLMUN CO.

**Twist closure** of this unique "dead-fold" film is done simply by grasping two upper corners of bag and twirling it up and over once or twice. There are no air pockets because bag is perforated.

**Tight, clear wrap** results, with no ties, seals or staples. Printed copy includes color blocks for marking weight and price of lettuce.

# Lighter-weight

A new and much thinner polyethylene film with improved clarity—showing an average gauge of about eight-tenths of a mil and costing only about half as much as cellophane—promises to have widespread interest in packaging, far beyond the specific produce pre-packaging application for which it was developed.

Most polyethylene film used in packaging so far is of 1¼ to 1½ mils thickness. Lighter gauges are usually very limp and difficult to handle.

The new material does, of course, have limitations. Although specific properties data are not yet available, it would obviously have higher permeability rates and lower physical strength merely on the basis of thickness. But in applications to light-weight contents seeking only a transparent flexible covering with a minimum of physical properties, this may be the most economical answer. Applications so far have required only simple, one-color printing, which the material appears to take as well as heavier film. In these applications, heat sealing has not been required, but it is said to be entirely feasible. Bags which are now being produced from tubular stock are heat sealed at the bottom by the converter.

The producer-converter of the new film has not identified the specific type of resin nor the extrusion techniques used.

But, in general, the clarity of this new film is indicative of the differing properties to be obtained from some of the newer types of polyethylene resin now being produced.

Curiously enough, one of the primary objectives of the development was not so much economy in the film itself as providing an easier method of closure of bags.

The pioneer user was Albers Super Markets Div. of Colonial Stores, Inc., Cincinnati. Faced with mounting costs of cellophane bags used for in-store pre-packaging of head lettuce, Albers Super Markets last summer decided to test polyethylene to determine its suitability.

First the company tried polyethylene bags of standard-gauge film. The chief difficulty encountered was that the bags would not twist shut and stay shut. This meant tapes or ties were needed for secure closing, an additional cost that made savings negligible over its regular lettuce bags.

A system was devised in which store personnel could stretch and then release polyethylene to achieve a twisted bag closure, but this was not

# polyethylene

*A new, clear film is little more than half the thickness of standard polyethylene and costs about half as much as cellophane; in lettuce bags it permits a twist-tight closure*

satisfactory or efficient, nor did the polyethylene bags have the transparency or the sheen of cellophane bags.

Albers approached a leading converter and presented the problem. By July, 1956, the manufacturer had developed the thinner-gauge polyethylene and had made enough bags for test purposes. This film, it was found, had interesting "dead-fold" characteristics. A bag top could be twisted shut and would stay shut.

Albers test marketed the bags in several types of outlets: urban and country, large and small, varying traffic and parking conditions, etc. It also ran comparison tests between identical types of stores, one using its regular bag and the other using the new dead-fold polyethylene bag.

The test results showed no change in sales: customers had no adverse reaction to dead-fold polyethylene and most, in fact, were not aware of the switch to a new film.

Albers has found the new polyethylene entirely satisfactory for lettuce in its outlets to date.

Lettuce heads are packaged either by dropping a head through a funnel into an open bag or by pulling the bag over the head in a simple two-step operation. It has been found that a neat package and effective closure results if the filled bag is simply gripped with both hands about 2 in. from the top and spun around. The twist stays. For lettuce packaging, bags come in two sizes and have holes die cut down each side to allow the produce to breathe.

The potential economy of the new film may be visualized from the fact that its average yield is about 38,500 sq. in. per pound, as against 20,000 sq. in. for 1½-mil polyethylene.

The potential in lettuce alone is substantial. One survey shows that packaged lettuce sells 16% faster and costs about 1 cent per head less to sell than lettuce sold from bulk. Packaging lettuce also (1) keeps it fresher in the store and home, (2) makes selection in the store wet-free and easier, (3) makes it look better in displays and (4) keeps it neater in the refrigerator.

Dead-fold polyethylene has other possible produce applications in addition to lettuce. The material is not considered strong enough to hold heavy items like potatoes, onions, apples, etc. However, it could hold many other kinds of leafy green produce.

It also may be used in packaging textiles. Such light-weight goods as sweaters would stack neatly on counters, since the dead-fold film would cling closely to the fabric. This polyethylene's better clarity would display the garment well and heat-seal closure would not be needed.

The achievement of these special properties, combined with outstanding economy, is a development which will bear watching by cost-conscious packagers in the coming months.

**Customers are pleased** with the tight, transparent wrap, which makes head of lettuce easy to examine and clean to handle. And Albers markets have saved nearly half on material costs.

**Credit:** *Light-weight polyethylene film developed and manufactured, and printed bags produced by The Dobeckmun Co., 3301 Monroe Ave., Cleveland.*

# New way to heat and eat

*Long-sought means of vending hot dogs really hot has been found in a carton package containing metal contacts that 'electrocute' the dog alone during dispensing cycle*

**Hot hot dog,** vended fresh from refrigerated machine in folding carton, comes complete with mustard 25 seconds after coin is dropped. Electrodes in carton carry a quick charge of electrical heat directly into hot dog itself when package drops to dispensing position. Local meat packers do the packaging of the hot dogs.

The latest addition to the heat-and-eat boom is an automatically vended hot dog which is packaged with a sealed portion of mustard and dispensed hot 25 seconds after a coin has been put into the machine.

Packaging plays a key role in the operation of the ingenious vending machine, called the "Vend-a-Frank" by the manufacturer, the United States Vending Machine Corp. of Philadelphia.

As far as is known, this is the first commercial example of a packaged hot sandwich to be vended from a refrigerated chamber. The way in which the hot dog alone, inside the package, is heated is most ingenious.

The vended hot dog—wrapped in a 9 by 12 in. sheet of waxed paper—has been pre-packaged in a folding carton along with a sealed polyethylene-cellophane pouch of mustard. Two staple-like disposable metal electrodes are inserted by a hand-operated machine directly into the hot dog itself through die-cut slits in the bottom of the box, as the final steps in packaging. The boxed hot dogs, complete with electrodes, are loaded into two vertical channels in almost the same way that cigarettes are loaded into vending machines. All boxes—84 in vending position, 70 in storage—are under refrigeration.

Deposit of the proper coins—usually 25 cents—starts the cooking cycle on the bottom box, ready for delivery, in one of the two channels. The circuit to the cooking terminal blocks—in contact with the electrodes into the hot dog—is completed. High-frequency current passes through the hot dog, heating it in 20 seconds to approximately 180 deg. F. At the end of the cooking cycle the machine automatically removes the electrodes from the hot dog and box, dropping them to a waste bin, and the package is discharged.

The customer gets a sizzling hot dog in a bun with a side portion of mustard, all sanitarily packaged in an individual box. The box itself is not heated. Electrodes are used only once to insure sanitary packaging.

According to the United States Vending Machine Corp., the machine has been under development for five years and has deliberately been kept off the market until all problems were successfully overcome. It has been in test markets for the past two

**The package** and its contents, including cellophane-polyethylene pouch of French's mustard. This stock carton, furnished by Vend-a-Frank licensors, is imprinted with local packer's brand name. Hot dog comes wrapped in sheet of waxed paper, not show. In bull's-eyes on base of package, left, note the die-cut slits for electrodes.

**Tear slit,** already started from one corner of the pouch, makes it easy to dispense mustard from the spout section.

**Electrodes,** inserted by local packer after package is filled, are long enough to penetrate through sandwich into frankfurter itself. When protruding ends contact heating element of vendor at discharge point, flow of high-frequency current heats the meat to 180 deg. F. in 20 seconds.

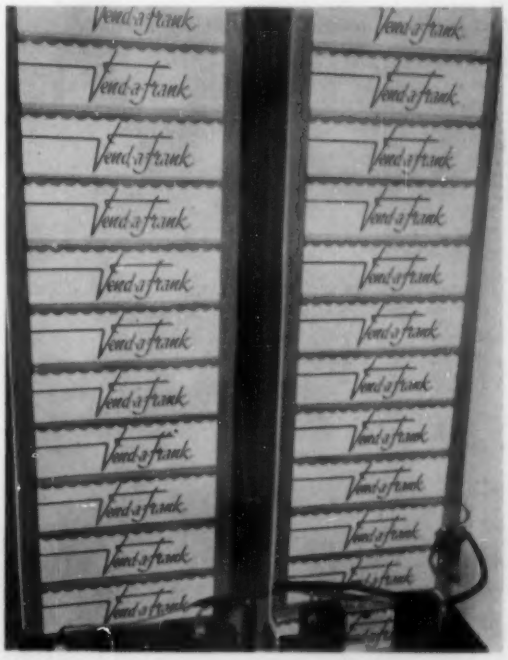
years. The machine is now being supplied to vending-machine operators throughout the United States and in Canada, Hawaii, Sweden and Germany.

Obviously, the sandwiches have to be made and packaged by local suppliers in each marketing area. To protect the operators and the machine's reputation, the makers of Vend-a-Frank have established quality controls for both the package and the meat.

U.S. Vending has signed contracts with leading meat packers in regions throughout the country to provide the hot dogs for the vending operators. The authorized hot dog must be the packer's top-grade product, 10 to the pound, not exceeding 5¼ in. in length and containing not less than 7% added moisture.

The company supplies the cartons, made of 16-pt. bleached sulphate food board, to meat packers to insure the uniformity necessary to trouble-free operation of the machine. It [*Continued on page 216*]

**Credits:** *Cartons by Royal-Pioneer Paper Box Mfg. Co., Inc., 1147 N. Fourth St., Philadelphia 23. French's mustard pouch filled by Custom-Pak, Inc., 3810 Hires Lane, Cincinnati 12, using film supplied by Standard Packaging Corp., 551 Fifth Ave., New York 17. Gulden's mustard pouch filled by Package Consultants, Inc., 1060 Myrtle Ave., Brooklyn 6, also using film supplied by Standard Packaging Corp.*




**Inside machine,** view from back shows how packages are stacked in two channels under refrigeration until bottom package reaches point of discharge, as at lower right, where terminal blocks contact package electrodes for quick heating. In practice, bottom of the box faces the blocks and not the side as shown in this photograph.

3 SURVEY OF A SUPPLYING INDUSTRY

# FOLDING BOXES

PHOTO COURTESY U. S. PRINTING & LITHOGRAPH CO.

*The industry that produces America's most widely used package has less than half the dollar sales, but nearly three times the unit volume of its nearest rival*

By far the most widely used package in the entire packaging field is the ubiquitous folding paper box. Currently, according to the Folding Paper Box Assn. of America, industry is using 115 billion folding boxes annually—which is 676 boxes for every man, woman and child in the country today.

This is nearly three times the consumption of metal cans (40 billion) and almost 44% more than the estimated 80-billion unit-total usage of glass containers in 1956.

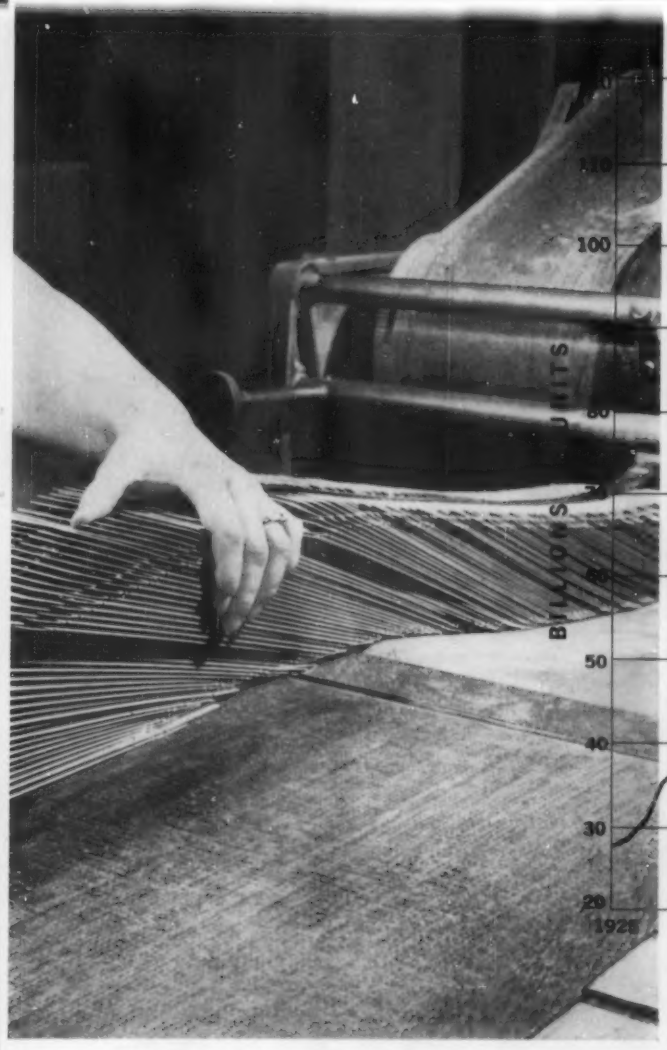
In dollar volume of sales the folding-box industry is also right up with the top three container industries. The $900 million reported by the folding box industry last year, representing a 7% increase over the preceding year, is second only to the $2 billion reported by can manufacturers and well ahead of the $700 million reported by glass-container manufacturers. Without counting multiple-trip use of milk bottles, beverage bottles, etc., glass-container production in 1956 is reckoned at 20-billion units.

This is a mighty industry to have started quite by accident, for mechanical production of folding boxes began just that way.

The grandfather of the modern folding box was known about 1850 as a "paper of tacks"—laboriously made of paperboard formed around a wood block or mandrel with ends folded over and secured by pasted-on labels.

One of the early makers of folding boxes in the mid-19th century was one Robert Gair, founder of the firm that still bears his name (now as a division of Continental Can Co.). The cartons were made by scoring the blanks individually, piling them up about 20 or so at a time and cutting the flaps with some kind of guillotine knife.

not the side as shown in this photograph.



**115 billion cartons** annually roll off the presses of 580 folding-box makers. Six biggest companies together do not account for more than 25% of the total business, indicating the wide distribution of folding-box manufacture.

One day in 1879, while printing seed envelopes in his Brooklyn printing plant, Mr. Gair had a run that went wrong. Some of the type cut through the paper like a knife. The incident gave him the idea of using dies on a press that would cut and score carton blanks automatically from a flat sheet—the basic principle of high-speed production of folding boxes today.

Gair's discovery occurred at just the right time—when the makers of crackers and breakfast foods were beginning to look around for inexpensive, disposable, light-weight containers to package their products in convenient consumer units. The folding box provided what was needed to package hundreds of the new products of growing mass production.

From these beginnings the versatility of the folding box has broadened its use into almost every major consumer-goods field—foods, soaps, drugs, toiletries, household products, tobacco, beverages, toys, hardware, sporting goods, textiles, paper goods—with new applications reported almost

**Air-gun stripping** is a comparatively recent time-saving development in the preparation of folding cartons for shipment. This pneumatic tool is used to run down the sides of stack of paperboard sheets to remove waste from the edges.

PHOTO COURTESY U. S. PRINTING & LITHOGRAPH CO.

PHOTO COURTESY U. S. PRINTING & LITHOGRAPH CO.

**Production begins** as unprinted boxboard is fed into press. Plain board moves toward color rollers on four-color press. Tinsel strings remove static electricity from boxboard, reducing friction so that board feeds into the rollers more easily.

daily. In the last 20 years usage has tripled, showing an increase of more than 40% in the last 10 years alone.

Two thirds of the 115 billion folding boxes used annually today are "primary" containers—actually the protective package units for such products as soap powders, breakfast foods, dry vegetables, etc. The remaining third are used as "secondary" containers, such as the cartons used over products in glass containers or collapsible tubes. Strangely enough, the latter third actually represents the larger share of total annual dollar sales, principally because cartons in this category require higher-quality board, more elaborate printing and coated surfaces to achieve the appearance and decorative effects demanded, say, for liquor and cosmetic gift packages or ethical drug packages.

## THE PACKAGE

Basically, the folding box (or folding carton, as it is also commonly known) differs from its older brother, the set-up box—into whose province its application has been encroaching steadily—in that the term "folding" designates a container of paperboard that is always delivered to the packager knocked down flat—never as a rigid box with stayed corners.

This knock-down feature, along with the economy, has been one of the folding-box industry's biggest selling points in recent years. No shipping space is wasted in transporting the flats, while the flat box blanks, it is pointed out, occupy negligible storage space in the user's plant.

In general, folding boxes may be classified into two primary forms.

1. The *tube*, constructed of paperboard, cut, scored, folded over and glued against the edges to form a hollow square or rectangular shape with end flaps that may be sealed, locked or tucked in an infinite variety of ways.

2. The *tray*, formed from a cut and scored sheet of paperboard with four sides folded and locked or glued together at the corners. One panel may be extended to form a cover for the carton, or two of the trays may be telescoped together to form a two-piece box.

Versatility lies in the numerous variations and hybrids that are possible with these two basic structures. End uses are as diverse as a cellophane-wrapped tray for doughnuts and a flip-top box for cigarettes.

The U. S. Patent Office could supply copies of several thousand patents on folding-carton constructions, with new ones being developed constantly to meet new requirements. Many styles used over the years have become standard. The Folding Paper Box Assn. estimates that there are some 200-odd styles in common use today and at least 200 more that can be adapted to specific requirements of different users.

In addition to constructions for a multitude of specific packaging jobs, the application of folding boxes has been vastly augmented by special properties that may be built into these containers, such as strength, grease resistance, water-vapor control, prevention of sifting for powdery or granular products, prevention of infestation, etc. Protective features are also added to the folding carton in the form of laminations and through the use of inner liners.

To the user, the folding carton is especially advantageous in the number of flat surfaces it offers for the colorful printing of the manufacturer's messages.

Here, based on the number of packages which he sells in a year, are literally millions of square inches of advertising space—for free. This is a situation that has been given the utmost attention in recent years with the booming trend to self

selection and the constantly increasing number of products competing on the shelves of the nation's retail stores.

## THE INDUSTRY

In contrast to can and glass-container manufacture, which is concentrated in a relatively few big companies, folding-box manufacture is spread over hundreds of companies. The FPBA estimates that there are 580 firms making folding boxes throughout the United States. From a practical standpoint, about 400 are factors in the business. Only about 200 are members of FPBA, which restricts membership to companies producing at least half of their volume in folding boxes. The six biggest companies—Container Corp. of America, Robert Gair Div. of Continental Can Co., Inc., Federal Paper Board Co. Inc., The Gardner Board & Carton Co., The Ohio Boxboard Co., Sutherland Paper Co.—together do not account for more than 25% of the total business. This wide distribution of manufacturing assures users of supply sources close to home, eliminating costly shipments over long distances.

On the basis of origin of shipments, the $900-million annual sales figure is divided as follows: East, $342 million; North Central, $450 million; South, $58 million; Pacific Coast, $50 million.

As in other industries, there has been a noticeable trend to integration and consolidation, principally in this field, through the acquisition by carton manufacturers of board mills and vice versa. Since paperboard is the basic raw material from which cartons must be made, such marriages, it is reasoned, assure better control over board manufacture to produce the uniformity across the sheet so

**Fine-screen color printing** on folding cartons today rivals finest magazine printing. Spectacular advances have been made in realistic reproduction through control of board quality, improved printing surfaces and improved inks.

**Hard-box cigarette package,** introduced two years ago for Marlboro, is now used for half-dozen brands, with three more currently being market tested. Flip-top box reportedly is the major factor in a $700,000 a month increase in folding cartons produced for the tobacco industry.

**Table I:** Estimated breakdown of dollar sales: folding paper boxes (1956) *

| *End-use classification* | *Estimated annual volume* |
|---|---|
| Food | $171,000,000 |
| Crackers and baked goods | 85,500,000 |
| Soap | 84,600,000 |
| Beverages | 73,800,000 |
| Paper goods | 67,500,000 |
| Hardware | 64,800,000 |
| Medicinal | 62,100,000 |
| Miscellaneous | 54,900,000 |
| Cosmetics | 50,400,000 |
| Tobacco | 45,000,000 |
| Candy | 43,200,000 |
| Retail boxes | 37,800,000 |
| Textiles | 28,800,000 |
| Toys and sporting goods | 14,400,000 |
| Rubber goods | 11,700,000 |
| Laundry | 2,700,000 |
| Military | 1,800,000 |
| | $900,000,000 |

*Folding Paper Box Assn. of America.

essential to high-quality color printing demanded for today's folding boxes.

Through a sustained educational and public relations program, the Folding Paper Box Assn. has been highly influential in establishing today's enviable position of the folding box as the most widely used package form.

FPBA members spent an estimated $4,000,000 on research and development in 1956—a figure upped from $1,300,000 in 1944.

With a $300,000-a-year appropriation for public relations, the association is conducting an extensive publicity campaign and making intensive studies of end uses for folding boxes in leading consumer-goods fields to broaden markets, upgrade products and show the increasing importance of packaging as a top-management function.

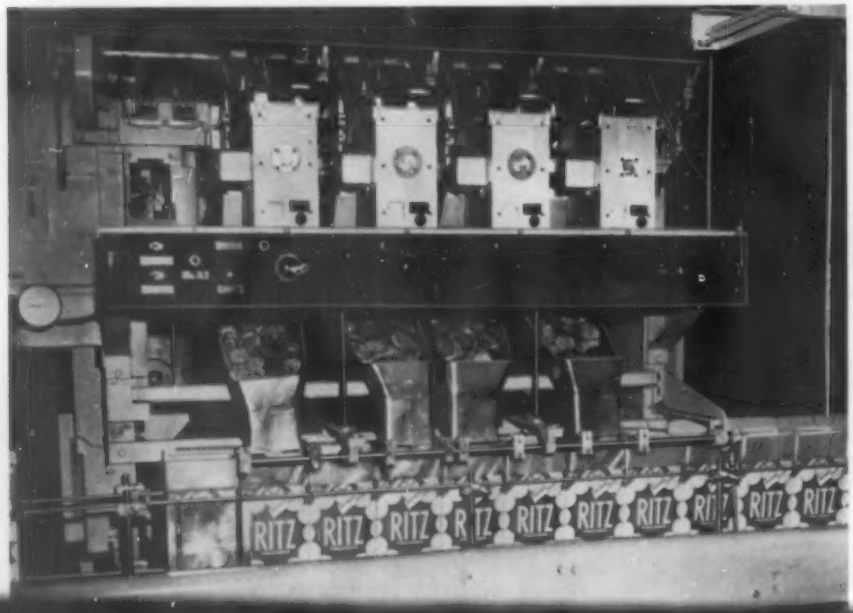
FPBA also sponsors annually a competition for the selection of the best folding boxes of the year. The winners of this year's competition are illustrated in this issue in the article starting on p. 126. Other activities include a speakers bureau and a series of sales training courses for folding-box salesmen.

Fastest-growing end uses for folding boxes, pointed out by FPBA, are for beverages, paper goods and cigarettes. In a breakdown by product fields, sales of folding boxes in 1956 were reported by the association as shown in Table I.

Sales to the beverage industry, primarily six-pack carry cartons, have jumped 220% in six years and are now running close to $72 million a year. This development has meant a whole new concept in carton construction and high-speed cartoning equipment. It has inspired a whole new trend in multiple-unit selling in other product fields through an extension of the multiple-unit cartoning idea. Industry sources estimate that 10% of canned goods will be sold in multipacks within the next 18 months.

The so-called "hard box" cigarette package, introduced for Marlboro about two years ago, has given the folding-box industry an important toehold in the cigarette field. [*Continued on page 193*]

**High-speed cartoning** demands precision-made cartons held to closest dimensional tolerances. At new Philadelphia Nabisco plant cartons are formed, filled four at a time and weighed at speeds to handle 700,000 crackers an hour output from 300-ft. traveling ovens.



# Power punch in foil

*How consumer-packaging principles can be applied for sales appeal and convenience of use in automotive parts; ignition points now come pre-assembled, sealed in foil*

One automotive accessory manufacturer dealing with such unglamorous, yet essential, parts as distributor contact-point assemblies has figuratively lifted a page from the highly successful merchandising story of industries which compete for the customer's daily attention in supermarkets and drug stores.

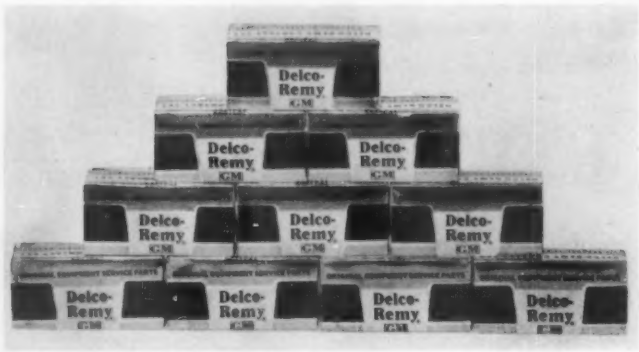
This manufacturer, the Delco-Remy Div. of General Motors Corp., Anderson, Ind., now is packaging sets of contact-point assemblies for the automotive replacement market in two-piece cartons of special construction, overwrapped with printed, heat-sealed, laminated aluminum foil. Colorful and easy to shelve or to display, the new package for these assemblies has been planned to be as sales appealing as those for frozen foods, breakfast cereals, candy bars, soaps or rolls of photographic film.

And in the solution of the packaging production problem this firm has also demonstrated how close cooperation between user and supplier of packaging machinery sometimes leads to improvements and innovations, which in this case are resulting in increased versatility and new applications for this type of carton forming and wrapping equipment.

Delco-Remy's Sales and Service Dept. sparked the program to develop a more effective package from the merchandising standpoint in cooperation with various other company divisions that joined in the project to achieve the final results.

The packages for the assemblies are small, 3 by 1½ by ¾ in.—eye catching in Delco-Remy traditional orange, silver, black and white. It is believed this is the first use, strictly for merchandising reasons, of an outside-printed, heat-sealed, laminated foil wrapper by the auto-parts industry. (The only other known previous use of this type of foil by the auto industry, including Delco-Remy, has been for a solely protective inner envelope. In these cases no consideration was given to the sales value of the outside wrapper.)

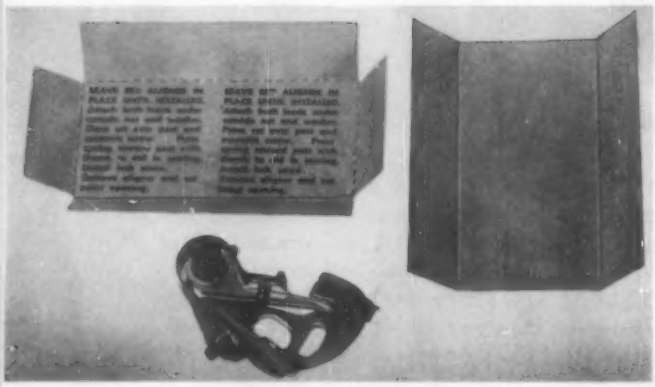
Reception so far to this innovation for auto parts has been so encouraging, according to GM's United Motors Service Div., whose dealers merchandise General Motors accessory products and replacement parts, that Delco-Remy is considering the printed, heat-sealed laminated foil overwrap for certain other of its small replacement units. The possibilities are unlimited, the company says, in that Delco-Remy is reportedly the world's leading producer of cranking motors, generators, distribu-



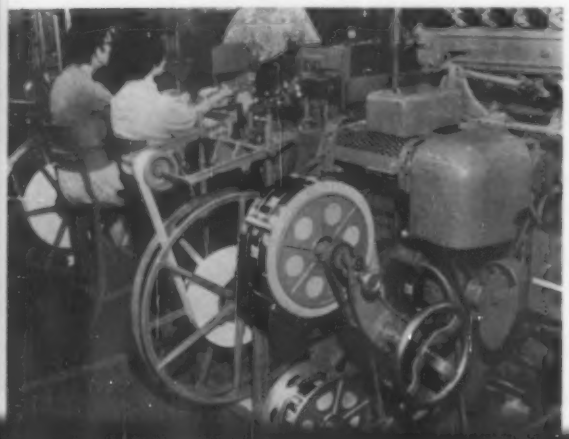

**Rectangular shape** of container lends itself to brilliant, effective mass displays that instantly call attention to the Delco-Remy brand name.

**Continuous-flow** packaging line begins with printing and forming of four-sided carton base from roll of sulphur-free paperboard in foreground. After base is filled by hand, it is covered with U-shaped piece formed from second roll of paperboard. Third step is foil wrapping and sealing operation. Completed packages are then inspected and loaded mechanically 10 to a unit-pack fibre can with metal ends.

**Two-member carton** consists of a four-sided base and a U-board cover, completely made in the machine operation. Additions to the equipment include a printing unit to reproduce assembly instructions inside the carton base and a specially designed die for cutting and scoring the four-sided base.



**Close-up view** shows how stock is fed mechanically from reels. Carton base is printed and formed from reel at left. Center reel feeds stock for cutting and forming of U-board cover. Printed foil wrapping material is fed from reel in foreground.



tors, voltage regulators, horns, switches and batteries. These products are used on all General Motors vehicles and on many other leading-name passenger cars, trucks, tractors, buses, light aircraft and marine equipment.

The new-type package has considerable merit other than for display and merchandising purposes. Auto parts are made chiefly of metal and thereby vulnerable to corrosion. Laminated foil offers the required protection against moisture for the packaging of small replacement units that often must be stored on dealer shelves for considerable periods of time.

In the case of the contact-point assemblies, however, deciding upon the type of wrapping machine to apply the foil posed a considerable problem. Because Delco-Remy points are now factory aligned to avoid tedious assembly and adjustment as they are installed on a distributor, more rigid protection than the 0.0045-in.-gauge, heat-sealed laminated foil to surround the points was absolutely necessary.

Delco-Remy engineers found that no standard packaging equipment was available to meet the requirements, namely, the mechanical forming of a two-member carton and wrapping it with heat-

sealing aluminum foil. It was decided finally to "take a look" at forming and wrapping equipment built by a machinery firm which was one of Delco-Remy's hometown neighbors.

This firm's equipment included mechanism for cutting and forming a conventional paperboard two-sided bottom tray, or U-board, and wrapping it. This U-board alone, however, did not afford the protection necessary. Delco-Remy tried solving the problem by using a second U-shaped board as a cover.

Shipping and laboratory tests disclosed that the package also needed ends. Delco-Remy designed and built a double die which successfully cuts a four-sided bottom tray to replace the original two-sided U-board base.

The combination of a two-sided cover and four-sided base provides the rigidity of a two-piece telescoping carton that gives adequate protection and is adaptable to the foil overwrapping operation. The package has the further advantage of unfolding readily when the outside foil wrap is removed.

The production line has been designed as a continuous, integrated operation, using all material from roll stock. The four-sided base section is formed from one roll of paperboard, ready for loading, which is done by hand. The U-shaped cover section is formed from a second roll of paperboard and placed over the filled base. The filled carton is mechanically wrapped and sealed with aluminum foil, also fed from a roll.

The foil wrapper, itself, is known as the strike-through, heat-sealing variety and is printed by flexography. It is comprised of an outside layer of aluminum foil, glue mounted to sulphite paper, which in turn is combined with wax-mounted tissue. Upon the application of heat, the wax bleeds through the tissue to effect the seal.

In their colorful new packages the assemblies are amply protected against the normal jarring and puncturing that can occur in factory shipping, dealer stocking and customer handling. The points are in perfect alignment when the package is opened, a most important engineering and sales feature that could be defeated by the inadequate protection of a conventional inner-tray package.

Delco-Remy reduced further the possibility of corrosion by using a neutral paperboard for the carton. A dealer handling a part that may not move so rapidly as non-durable products is assured that his customers receive a product in as perfect condition as the day it was assembled on the production line, the company maintains.

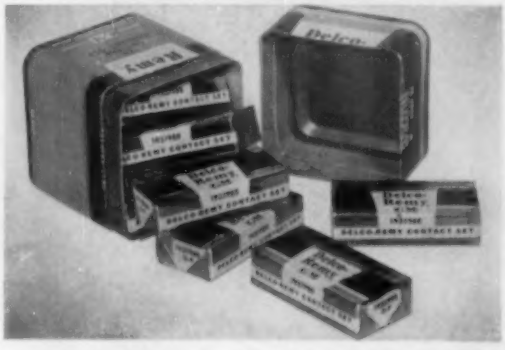
Delco-Remy added other innovations to the conventional machinery to achieve a modern, continuous-flow operation. These additions include a printing process for reproducing assembly instructions on the inside of the carton base and a stacker to insert mechanically 10 of the contact-set assembly packages inside a conventional unit-pack fibre can.

**Final steps** include: inspection of individual foil packages (left), mechanical insertion of 10 packages in unit-pack fibre cans, weighing filled cans (now automatically) to assure full load in each can, imprinting part number on empty unit cans (right), which move by conveyor for filling.

In providing this more attractive and durable package, Delco-Remy says it was able to develop the new package without any appreciable increase in costs. The company, obviously, is well satisfied with its adoption of the heat-sealed, laminated-foil method of packaging and is advertising its new package extensively in automotive trade publications. The package has proved so successful that all Delco-Remy contact assemblies, whether the new pre-assembled and pre-aligned type or older models that come in two parts, are to be shipped in the new carton.

**Credit:** *Tray and cover forming and wrapping equipment by Lynch Corp., Packaging Machinery Div., Anderson, Ind. Printed foil wrap by The Specialty Papers Co., 802 Miami Chapel Rd., Dayton 1, Ohio. Paperboard by Chatfield Paper Co., 3265 Colerain St., Cincinnati, Ohio. Metal-end fibre can by Sefton Fibre Can Co., 3275 Big Bend Blvd., St. Louis 17, Mo.*

**Fibre cans** are used as the shipping units. These containers have a handy string opening.



## Vertical design expands frozen-food display space

Food Fair Stores, Inc., is packaging its entire line of F. F. DeLuxe private-brand frozen foods in new overwraps with a vertical design arrangement to gain display space in refrigerated cabinets. The new cartons are stacked flat with the narrow end parallel to the front of the cabinet. In this way, about 25% more rows of packages can be held than in the customary horizontal arrangement, the company maintains.

In stores where cabinet space is a problem, Food Fair plans to stack all national brands vertically even though they may be designed for horizontal display.

The new overwraps also reverse normal procedure by having trade and product identity superimposed on natural-looking, over-all color illustrations of product covering front panel and all four sides of the package. This was done to provide the quicker recognition of contents shoppers are demanding today.

**Credits:** *Design by Egmont Arens, 480 Lexington Ave., New York 17. Overwraps by Western-Waxide Specialty Div., Crown Zellerbach Corp., 2101 Williams St., San Leandro, Calif.*

# DESIGN HISTORIES

## Picture appeal for wallets

Improved display is the aim of a new "his" and "her" package for Rolfs personal leather goods such as wallets and billfolds. Replacing a formal gray box with the company name in script across the corner, the new set-up box carries a photographic reproduction of a pretty girl and a handsome young man positioned across the right half of the cover. Rust-color printing indentifies the merchandise for men and blue, for women. "His" or "her" face is spotlighted in black and white by a circular area tooled in the color plates and the words "His Rolfs" or "Her Rolfs" are printed in rust or blue and white on the black left side. Shipping sleeves that were formerly plain white paperboard now bear the same photographic reproduction and legends printed in black and white. Colored paper bands are used around wallets or billfolds inside the boxes. These bands also carry "his" or "her" colors with legends and appropriate data.

**Credits:** *Design by Whitaker Guernsey Studio, Inc., 444 E. Ontario St., Chicago 11. Box by Wright Paper Box Co., Fond du Lac, Wis.*

## Safe multipack

Continued protection for precision products after the package has been opened is provided by a new folding carton holding 12 of Start Pilot Corp.'s new motor starting-fluid capsules.

The one-piece carton is glued to form a platform base with 12 die-cut openings in the inside top panel. The openings are irregular in shape to hold capsules of various diameters. Hinged at the rear of the carton, the cover telescopes over the base. It closes to within 1/16 in. of the inside top panel, pressing firmly on the capsule flanges to hold them steadily in place, thereby preventing them from swinging against one another in the package. Easy to open and reclose, the carton is designed to make the capsules conveniently accessible to the user and is retained to protect remaining capsules.

Four of the complete capsule packages fit in a reverse-tuck shipping carton and all bear company and product names printed in orange on light-colored board.

**Credit:** *Cartons by Robert Gair Div., Continental Can Co., 100 E. 42 St., New York 17.*

# DESIGN HISTORIES

## Another old timer gets face-lifting treatment

For stronger shelf appeal, Lehn & Fink Div. of Lehn & Fink Products Corp. has put Lysol, reportedly the world's largest-selling disinfectant, in its first new package since the product was introduced in this country more than 50 years ago. The new dark-brown glass bottle, topped by a fluted yellow urea plastic cap, is a sleek oval of hourglass design, shaped to fit in the palm and afford a good grip even with wet hands. For identification, label and carton retain red and yellow from the original package, now combined with deep brown and set off in white for lighter, more-inviting appearance. The familiar brand-name logotype is also retained in a modernized form. The carton bears a picture of the new bottle and both carton and label list and illustrate uses and instructions for the product.

**Credits:** *Design by Charles Magers, Box 495, Princeton, N. J. Bottle by Armstrong Cork Co., Lancaster, Pa. Cap by Standard Cap & Molding Co., Inc., 307 E. Easton St., Baltimore, Md. Label by National Label Co., 19 St. & Indiana Ave., Philadelphia 19, Pa. Carton by The Lord Baltimore Press, Inc., 1601 Edison Hwy., Baltimore 13, Md.*

du Lac, Wis.



## New cleanser carton switches use emphasis

The new carton for Soilax household cleaner (right) shows how package design may be used to increase product uses. By emphasizing the advantages of Soilax for cleaning floors as well as woodwork and walls, Economics Laboratory, Inc., manufacturer of the product, foresees an important sales increase as a result of this package change, which is backed by a half-million-dollar, six-month advertising and sales-promotion campaign scheduled to hit its peak at spring cleaning time.

The new package features a checkerboard pattern in red and yellow on a white background with touches of bright blue. It is designed to suggest the "soiled floor-to-clean floor" idea. A dominating logotype is printed in bright red on all sides for quick identification however the cartons may be stacked.

Promotional copy and directions were kept short and simple to denote ease of use. Other applications are described on the back of the carton.

**Credits:** *Design by Lippincott & Margulies, Inc., 430 Park Ave., New York 22. Carton by The Ohio Boxboard Co., Rittman, Ohio.*

# DESIGN HISTORIES

## Upgraded seasonings

To augment regular spice departments and to produce additional sales at attractive profit margins, Durkee Famous Foods Div. of the Glidden Co. is presenting a new line of specialty and gourmet seasonings in straight-side glass jars with decorator-color labels to harmonize with the modern kitchen.

The labels provide quick product identification as well as directions and suggestions for using the various spices. A window near the bottom of the label shows the shopper what she is buying and warns when her supply is low.

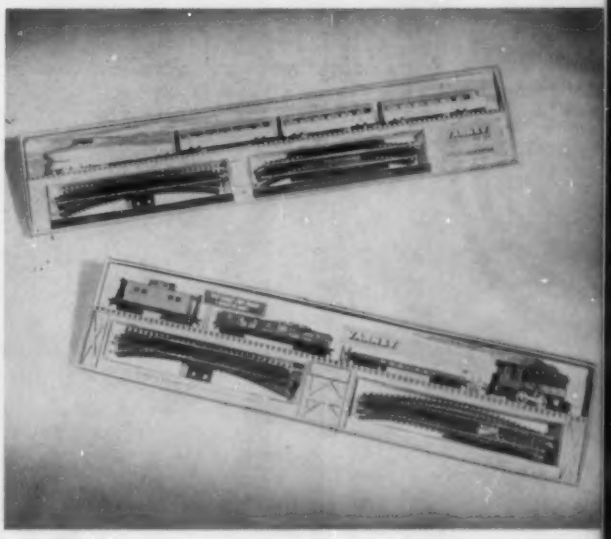
The light-weight jars have plastic shaker tops which are easily removed for teaspoon measuring and are fitted with color-harmonized, interlocking caps that provide a tight seal and permit easy stacking. The whole line provides an appealing array in a new gravity-feed display rack.

**Credits:** *Glass jars and lithographed metal closures by Owens-Illinois Glass Co., P. O. Box 1035, Toledo 1, Ohio. Labels by William W. Fitzhugh, Inc., 200 Fifth Ave., New York 10. Metal display rack by Progress Wire Products, Inc., 3535 W. 140 St., Cleveland, Ohio.*

## Scenic platforms give counter appeal to open box

When a survey showed its model trains were being displayed with box covers removed at points of sale, Varney Scale Models Co. adopted a new design technique that is reportedly increasing sales without boosting packaging costs. With all design on the outside of former set-up box covers, the trains lacked appeal and company identification when they were uncovered for retail display.

By printing colorful landscape settings and tressels on inside die-cut platforms holding the train components, the company now creates the illusion of trains highballing down the track in a straight line. Changing to longer, narrower boxes for some of the sets also increases the realistic effect. Company identity and a brief selling message, too, are displayed prominently on the platform. The new container draws attention, stimulates the buyer's imagination and provides an additional play-use feature for the child at home, according to the company.



**Credits:** *Design by Alan Berni & Associates, Inc., 580 Fifth Ave., New York 36. Set-up box by Tropical Paper Box Co., Miami International Airport, Miami, Fla.*

# DESIGN HISTORIES

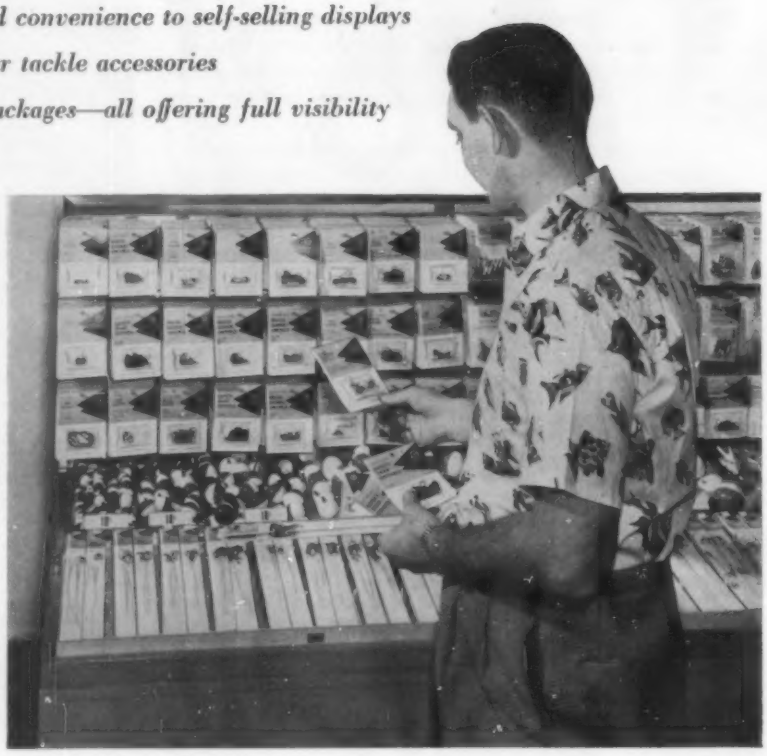
## Syrup in non-drip can

A significant new trend in syrup and honey packaging may be indicated by the appearance of William Barnes, Inc.'s Billy Boy table syrup in a metal can with convenient non-drip polyethylene nozzle and urea cap. The packer expects the introduction of the new package—reportedly the first application of this type of container for table syrup—to have a far-reaching effect on sales as housewives become acquainted with its convenience and non-breakable features. The colorfully lithographed can with easy-pouring feature supposedly saves syrup, prevents sticky fingers and messy tablecloths. Though most syrups and honey are now packaged in 12-oz. containers, 22-oz. cans were selected for this syrup as more preferable by customers and retailers in today's self-service supermarket merchandising. The new cans of syrup are being shipped 12 to the case and marketed through food chains throughout the upper Midwest.

**Credits:** *Cans by American Can Co., 100 Park Ave., New York 22. Nozzles by Pittsburgh Plastics Corp., Route 168, West Pittsburgh, Pa. Urea caps by Garmold, Inc., Lackawanna Ave., Totowa Boro, N. J.*

# Fisherman's delight

*Sears brings new order and convenience to self-selling displays of fish hooks and 299 other tackle accessories with just three kinds of packages—all offering full visibility*



**Easy-to-pick** fishing accessories are selected by a Sears customer from pegboard and counter display. On the counter are cards encased in butyrate sleeves, containing lengthy items such as wet flies, leaders and snelled hooks; hang-up cards holding formed-acetate boxes of hooks, etc., are on left of the back board and on right are paper-backed hang-up polyester bags containing sinkers. Only floats still resist packaging.

Take 300 fishing-accessory items made by four different suppliers and prevail upon these manufacturers to pack the products in a coordinated family of just three basic packages of outstanding use value that can be displayed for self-selection merchandising at a saving of 50% in space.

Briefly, this is what Sears, Roebuck & Co., Chicago, has accomplished in revamping the packaging of its J. C. Higgins brand of fishing accessories. The new line, now going into Sears' 700 stores from coast to coast, may have widespread repercussions on the packaging of these difficult-to-handle, small products—hooks, snaps, flies, sinkers and leaders.

Until this year Sears, like most stores, put its fishing accessories in bins. The 300 different unpackaged items called for a great amount of glass partitioning in display cases. The small, intriguing items invited pilferage. What little packaging did exist had little function or related brand look because of the varying sources of supply. Pricing the binned items was extremely difficult because customers quite often bought odd fractions or multiples of the basic pricing unit.

Sears turned to packaging not only to solve these problems, but to create greater sales for fishing accessories than existed before.

The company started with the advantage of being able to engineer its packages to fit display fixtures exactly, since these fixtures are uniform in all Sears' stores. Sears called in the four different suppliers of the products and outlined the problem. Justifiably, the manufacturers did not want to carry a big inventory of varying packages for the hundreds of fishing accessories.

Sears packaging experts, working closely with packaging suppliers were able to present to the fishing-goods manufacturers three packages to cover all 300 items:

1. A polyethylene-polyester laminated film bag with a hang-up-hole saddle label.

2. A hang-up card with a locked-on thermoformed acetate "slide-track" box.

**Three basic packages** take care of 300 different items. At top, wire leaders in a pull-out card held in extruded butyrate sleeve. At bottom left, swivels in a two-part acetate slide box held by card. At right, polyester bag stapled to a hang-up header for packaging heavy items like sinkers.

3. An extruded butyrate sleeve fitted with a paperboard pull-out insert.

Each of the packages comes in one basic size.

### Polyester-polyethylene film bag

The bag is used only to package sinkers. The polyethylene-polyester lamination (1 mil polyethylene, ½ mil polyester) was selected for its clarity, its strength sufficient to hold the heavy product and its heat-sealing characteristics.

Though Sears sells several different types of sinkers, only one bag and two saddle-type labels are used. The labels are identical in size and design, varying only in price marking. Sears packages its many different sinkers to sell for either 29 or 39 cents a bag. Such a simple supply of packaging materials requires the manufacturer merely to have the labels imprinted by a local printer according to production schedules, with specific information on type of sinker, size and stock number.

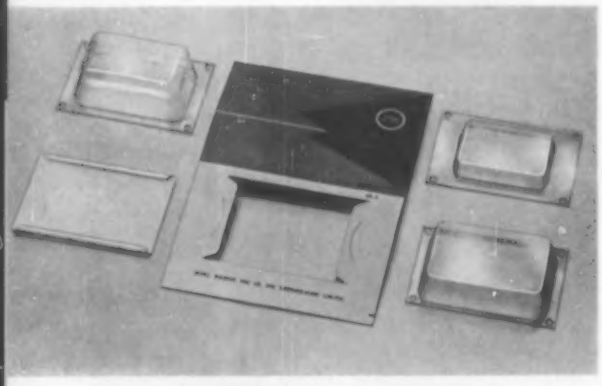
This technique of imprinting detailed information on a basic label is used for all three packages. In one case a manufacturer installed his own multigraph machine to print the labels at his plant instead of using a local job printer.

Typical of the problems Sears ran into was that

**Bag components** are fold-over header label and heat-sealed bag of laminated polyester-polyethylene film—strong enough to contain heavy, sharp objects. Manufacturer prints Sears-furnished label locally with specific product information. Stapling and hole punching are done in one operation.

**Slide-on box** is thermoformed of transparent acetate and slips into edge channels formed in the opaque white acetate base. Four beads in the base piece serve as stops.

**Display cards** hold slide boxes in die-cut slots. Shown here are "bubbles" of three different sizes, ranging to smallest shown at right, which package entire line on standard cards. Removed from card, the box has permanent use in the tackle box.



**Components** of slide box and card package, showing range of box sizes. All fit on same base.

of attaching the saddle label to this film bag. The label extends on the back to run the full length of the bag, which provides a white background to show off the merchandise to better effect. The label requires a hang-up hole and two staples for fastening it to the bag. At first suppliers thought the hole punching and stapling would require two operations, but Sears pointed out that this could be done in one step with a type of twin-anvil stapling machine equipped with a punch.*

### Hang-up bubble card

The hang-up card (same basic design printed with three different prices) and thermoformed acetate box is used to package hooks, snaps, swivels and dry flies. The bottom half of the card is die cut with special slots uniquely designed to hold a "slide-track" acetate box. The box is made from two pieces: an opaque white acetate bottom with tracks on two opposite sides and a transparent acetate piece that slides into the tracks and has a box-shaped cavity thermoformed in the center. After the packer fills the cavity with the required items, she locks the box onto the card by inserting die-cut paperboard slots between the box's two snug-fitting acetate pieces.

The transparent acetate section of the box comes with cavities of three different sizes, but with identical over-all dimensions to fit the single size slide-track backing piece of opaque white acetate. This is good merchandising, since small items are packaged in the small cavity to look like a "full box."

The cards are imprinted locally with specific information according to the fishing accessories' manufacturer's production schedules.

Any hang-up card package can be made from three of seven components: three die-cut cards, identical except for price marking; one basic slide-track acetate backing piece, and three transparent acetate cavity sections. Again, this represents a great packaging savings to the product manufacturers.

The acetate box makes an excellent re-use package after it is removed from the card. Thrown into a tackle box, the acetate holds and protects small fishing paraphernalia. The box's two sections lock together. The transparent cavity piece has four formed beads, one at each corner, which serve as stops at each end of the slide tracks when the parts have been pushed together.

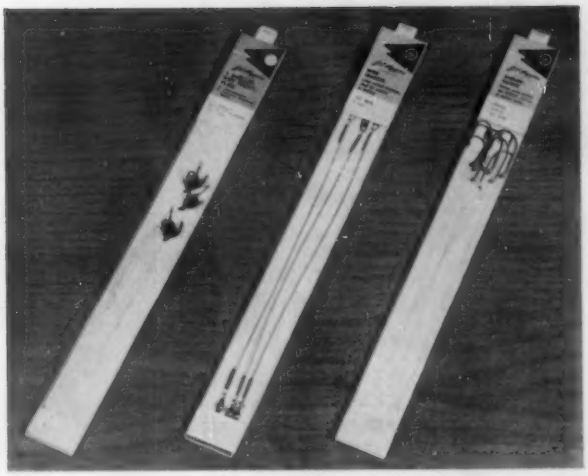
Although such things as hooks are often packaged in a molded polystyrene box (also a good re-use container), such packages lack informative labeling or product identity; the hooks must lie on top of an inserted card, or a card must be placed on top of the hooks in this type of box.

### Extruded sleeve

The third type of package is like a transparent scabbard. The extruded butyrate sleeve fitted with a paperboard insert is used to hold wet flies, wire and nylon leaders, and snelled hooks. While many of these items are currently being packaged in one way or another, the Sears approach is a complete departure since the scabbard makes the product visible to the customer and holds the lines straight. Normally, packages for leaders and similar items are coiled inside a folder, making them invisible to the buyer and susceptible to snags in the lines.

The paperboard insert is a long, slender strip which is die cut and scored in such a fashion that when folded it forms a long compartment inside the sleeve and has a pull-out tab that extends beyond the butyrate sleeve. The insert piece can be pulled

*See "A New Way to Package in Film," MODERN PACKAGING, June, 1956, p. 118.



**Tube of butyrate** snugly encases paper folders holding sets of flies, leaders and snelled hooks, keeping contents visible and in good order.

out to remove one of several items and then reinserted to protect the unused hooks, leaders or flies.

Only one butyrate sleeve is required for various versions of this package. Two paperboard inserts are provided, one with a 39-cent price and the second with a plain white price spot (for individual pricing of the hand-made wet flies).

This package, too, can be thrown into the tackle box for many after uses. It gives visibility and protection to hard-to-control fishing accessories.

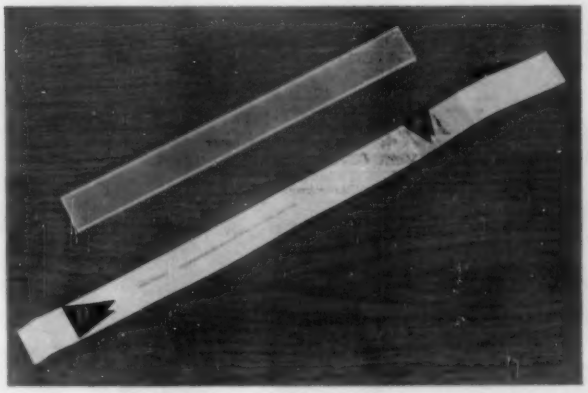
**Over-all**

With one bag, one butyrate sleeve, four acetate sections and seven cards or labels, Sears has reduced a major packaging problem to a simple and workable solution.

The packages have a uniform family appearance which is nicely coordinated with that of previously established J. C. Higgins-brand products. They require 50% less display space than the old binning set-up, are all pre-priced (except wet flies) and all have transparency which gives fast and easy product identity that should boost impulse buying. Brand recognition and informative labeling are not sacrificed in making these items highly visible to the customer.

These benefits, Sears feels, will compensate for any added packaging costs when sales results are determined at the end of the fishing season.

**Credits:** *Hang-up cards, sleeve insert cards and acetate boxes by Paper Package Co., 1036 N. Capitol Ave., Indianapolis 6, using acetate by Celanese Corp. of America, 290 Ferry St., Newark 5, N.J. Laminated polyethylene-polyester bag by The Dobeckmun Co., 3301 Monroe Ave., Cleveland 13, using Mylar polyester film by Du Pont. Butyrate scabbard by Extruded Plastics, Inc., New Canaan Ave., Norwalk, Conn., using butyrate by Eastman Chemical Products, Inc., Kingsport, Tenn.*



**Components** of the scabbard-type package, showing plastic housing and simple paperboard folder.

**Easy to open,** with pull tab at top, the scabbard package also has permanent utility for the fisherman in the tackle box.

1

Packaging

Pageant

2

3

Packaging

Pageant

4

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Packaging

Pageant

6

**1** C. E. Wilson Nurseries' colorful corrugated shipper holding six rose bushes doubles as a display and carry-home unit, promotes multiple sales. Container, Gaylord Container Corp., Div. of Crown Zellerbach Corp., St. Louis, Mo.

**2** Swish, Ox Fibre Brush Co.'s new wet mop with two-piece handle, comes in a printed, corrugated display package that can be hung on a rack or sold off the counter. Center section is polyethylene overwrapped to hold mop head. Package, Columbia Container Corp., Baltimore, Md. Polyethylene wrap, Diaphane Corp., Philadelphia.

**3** New 2½-lb., family-sized, tamperproof cartons for Lykes Bros.' smoked sausage have a front panel hook lock that gives a tight closure and a large window for product visibility. Carton, Marathon Corp., Menasha, Wis.

**4** Gift appeal is given to Zenith's Royal "500" 7-transistor pocket radio, with accessories, in this set-up box with transparent acetate cover colorfully printed with crest, logo and product identity. Box, W. C. Ritchie & Co., sub. of Stone Container Corp., Chicago. Shipper, Stone Container.

**5** Safe, easy stacking is the feature of these private-mold quart jars of Tidy House Product Co.'s GlossTex Double-Duty Starch. Flat-top closure fits into recessed bottom of jar. Jars, Owens-Illinois Glass Co., Toledo, Ohio; Brockway Glass Co., Brockway, Pa., and Ball Bros. Co., Muncie, Ind. Lithographed metal closures, Ball Bros. Wrap-around paper labels, Muirson Label Co., Inc., Peoria, Ill.

**6** A Pennsylvania Dutch motif is an appropriate design for the four-color cartons introducing the Megs Macaroni Co.'s new "Pennsylvania Dutch" brand Egg Elbow Macaroni. Cartons, Rossotti Lithograph Corp., North Bergen, N. J.

**7** Sun Maid Raisin Growers of California are using a 40-lb. kraft bag with 10-lb. polyethylene lining, developed after 3½ years of testing, for Sun Maid raisins in 2- and 4-lb. sizes. Bags, Crown Zellerbach Corp., San Francisco.

**8** A daintier plaid design printed in different pastel colors features the new carton for Scott Paper Co.'s new pastel-colored "Scotties" tissues. When tear-out oval is removed, consumer has non-commercial decorator color box. Bottom of carton illustrates uses. Design, Jim Nash Associates, Inc., New York. Cartons, Ohio Boxboard Co., Rittman, Ohio.

**9** A new 2½-lb. carton for Reynolds Metals Co. Charcoal Briquets for outdoor barbecues is overwrapped with three-color-printed foil and holds three foil envelopes of special granular charcoal starter.

**10** New corrugated shipping cartons adopted by Richard's Wine Cellars carry an outline of the Richard's bottle on the end panels, to which a label of the type of wine packaged is applied. Cartons, Owens-Illinois Glass Co., Toledo.

**11** Cummings Markets report a 50% increase in pork, beef and calf liver sales since introducing these polyethylene-

**7**

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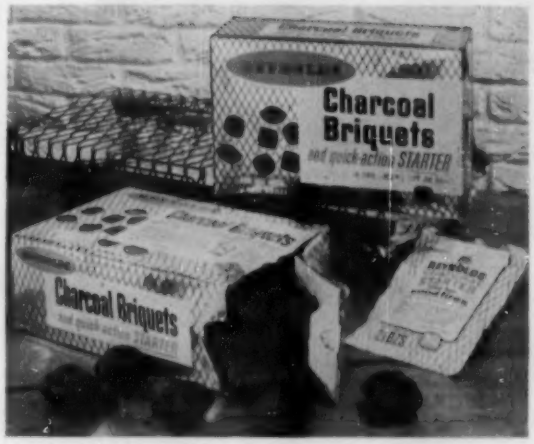
**9**




**10**

11

cellophane pouches. White copy, accented in red, stands out well against deep color of product, visible through the film pouch. Pouches, Milprint, Inc., Milwaukee.

**12** An inexpensive carton serves as a mailer and a dispenser for Foamart Co.'s Vita Foam Safe-T-Tape, a self-sticking foam-rubber tape. For mailing, a label is applied without marring appearance. End tucks are for dispensing tape. Design, Robert M. Baldwin Co., Newark, N. J. Carton, Disbrow Mfg. Co., Inc., East Orange, N. J.

**13** Envelopes made of acetate-foil-vinyl film are used to market refills for Paper-Mate Co.'s pens in drug and variety stores. The silver-colored envelope is printed in three colors: white, red and a third color corresponding to the color of the packaged refill. "Metalam" envelope, The Dobeckmun Co., Cleveland, Ohio.

12

**14** Quick identity for a pet preparation is provided by the design of this aerosol container for Pet Accessories, Inc.'s new Dry Foam-Kleen dry bath for dogs and cats. Design, Gilbert Snyder, New York. Container, Crown Cork & Seal Co., Philadelphia. Cap and valve, Clayton Corp., St. Louis, Mo. Paper label, Walker Rackleff Co., New Haven, Conn.

**15** Children carry home their new skates in this appealing handled carton, introduced by Glove-Union, Inc., sole licensee for Walt Disney's Mickey Mouse roller skates. Carton, Badger Carton Co., Inc., Milwaukee.

**16** Polyester, foil and cellophane are combined to give added strength to a new fold-up pouch for Larus & Bro. Co.'s "Executive Mixture" pipe tobacco. Pouch, Shellmar-Betner Flexible Packaging Div., Continental Can Co., New York, using DuPont Mylar polyester film.

13

**17** Full-color, appetite-appeal designs feature the new foil wraps for three heat-and-eat quick-frozen dinners marketed nationally by Ocoma Foods Co. Each package contains a rigid aluminum foil tray in which the dinner may be heated. Wraps, Milprint, Inc., Milwaukee, Wis., using Alcoa foil.

**18** This rich-looking presentation case for Bulova Watch Co.'s new electric razor is a hinged metal box covered with blue-black simulated leather with brass trim. Inside of the cover is satin lined, while the razor rests on a velvet-covered base. Box, Arrow Mfg. Co., West New York, N. J.

**19** A natural for glass packaging is "2 Sec'n Tea," a new instant liquid tea concentrate marketed by American Brands, Inc. Four-color label and metal screw cap complete the package. Label design, Frank Gianninoto, New York. Label, Independent Offset Lithographers, Inc., New York.

**20** Double-wall cellophane bags for Seaside brand dried lima beans eliminate package breakage, according to the California Lima Bean Growers Assn. The 1-lb. bags are made from 9¼-in. webs of 300 MS-8 cellophane. Avisco film converted by Milprint, Inc., Milwaukee, Wis. Simplex-O-Matic packaging machine, Simplex Div., Food Machinery & Chemical Corp., Oakland, Calif.

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Packaging Pageant

Packaging Pageant

Packaging Pageant

# OWENS-ILLINOIS ASSURES YOU A

### Co-ordinated Research

*Pure research* into formulae and fabrication of glass, *packaging research* into processing and handling methods in customer plants, and *market research* into consumer attitudes, add up to greater specific value for your packaging dollar.

### Engineered Design

The package that takes your product to market must take *three* needs into account. Considerations of its function in the retail store, its operating efficiency and its consumer utility all become a part of the prescription for an Owens-Illinois package.

### The Right Container

Versatility of facilities and talents points to Owens-Illinois as your best source of supply for a wide range of specialized needs: containers where beauty, utility and tradition are blended in the proportions required by different product classifications.

# Meet a couple of

# COMPLETE PACKAGING APPROACH

**The Right Closure**

Know-how as to the best available liner and closure—best for packing, displaying, or using a specific product—may well be one of the most important single points through which expert packaging counsel will reward you many times over.

**Needed Fitments**

With emphasis on the word "needed," Owens-Illinois specialists are keenly aware of sales benefits possible through use of plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.

**Merchandising Cartons**

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and retail warehouse as well as on your own filling line and in transit. Owens-Illinois is pioneering such developments.

# beautiful sales ideas!

***Your special products are sure to get more attention, more sales in containers like these! Custom-made for you by Owens-Illinois***

A container that matches the appearance and convenience of these Owens-Illinois custom designs *is a sales idea in every sense of the word!*

*Handsomely formed*, such a container draws the customer's eye—quickly creates a favorable over-all impression—makes a strong promise for the character and quality you have given your product. *Intelligently designed*, it makes your product easy to use, keeps it fresh from first use to last—and thereby aids measurably in building repeat sales.

Such containers have long been a specialty at Owens-Illinois . . . developed for packagers by the experienced designers and packaging experts that staff the O-I Container Design Service.

* * *

So whether you need a custom-designed container or help in the selection of a stock mold—call on Owens-Illinois. Here, you have a marketing-minded supplier for your complete salespackage—from glass container, through fitments and closures, to the final carton.

DURAGLAS CONTAINERS
AN (O) PRODUCT

**OWENS-ILLINOIS**
GENERAL OFFICES · TOLEDO 1, OHIO

**Packaging line** consists of 11 bagging stations for filling the new polyethylene roll-bags. Vegetables are first washed, sized and graded, then are conveyed on moving trays (left foreground) to the operators. After bagging, the carrots are packaged in a machine-closed wirebound box.

**Finished package** made by efficient new roll-bagging system for pre-packaged carrots, developed at Gulf Distributing Co., won a 1956 Award of Excellence in the recent competition held by the Produce Packaging Assn.

# Bags by the roll

*Printed polyethylene bags dispensed from a reel, snipped off singly for filling, speed carrot pre-packaging and eliminate waste for Texas produce shipper*

Colorfully printed polyethylene bags which come in continuous roll form are providing new efficiency in packaging consumer units of fresh produce. Use of the continuous bags, which come in rolls of 1,000 units, reportedly has resulted in drastic reduction of wasted bags, streamlined filling operations and speedy brand change-over for Gulf Distributing Co., Weslaco, Tex.

Gulf receives its produce from the fertile Rio Grande Valley of Texas where crops are grown the year around, vegetables (carrots and cabbages) in the winter and cotton in the summer. Carrots proved to be the first major item practical for pre-packaging in consumer-sized units and, with the advent of the 1952-53 vegetable season, the pre-packaging of the vegetable into 1-lb polyethylene bags was an essential aspect of the fresh-produce shipping industry.

In its experimental stages this packaging was performed by costly hand labor, but the following year marked the introduction of machinery for all of the operation except the actual bagging—a stage of the packaging line which was marked by costly waste and production delay.

Individually cut bags were used, which were awkward to handle—bags stuck together, were difficult to open for filling, frequently fell to the floor and, in short, made inefficient an otherwise streamlined operation.

**How it works**

With the new bags in roll form, carrot prepackaging takes place in one continuous cycle. As the steady flow of the carrot crop moves into the packing shed, the vegetables are washed, sized, graded and conveyed on moving trays to the operator. The dispenser with its 1,000-bag roll is positioned directly in front of the operator and above the carrot trays. The worker merely pulls off a bag and places it on the scoop to be filled. She seals it with pressure-sensitive tape and drops it on a filled-bag conveyor. The final packaging step sees the 1-lb. bags placed in a 48-bag wirebound box, which is machine closed.

The roll bags are of the familiar gusset type, formed from a continuous web of material and perforated with "breathing" holes. The only difference is that they are supplied in a roll uncut below the crosswise bottom seam of each bag.

The bags are shipped to the packaging plant in corrugated cartons containing five 1,000-unit rolls, mounted on flanges die-cut from extra-heavy corrugated dividers.

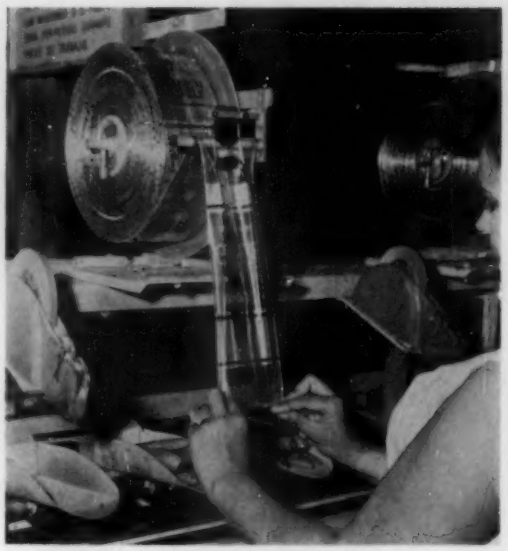
Separation of individual bags is performed by pulling on a perforated cut-off point established in the manufacture of the roll, which may be mounted at a point below or above the produce supply. A specially designed key pre-opens the mouth of the following bag as it separates the leading bag from the roll.

Gulf has found the roll bag to be eminently practical. Its use costs no more than individual bags and has eliminated bag losses through scattering at the packaging point. The 1,000-unit bag roll also furnishes a ready check on output totals.

Bags marked with various brands can be changed in a matter of seconds—the entire line may be switched from one type of bag to another without pause in the packing or shed operation. No bags are wasted and the floors remain uncluttered by dropped bags which formerly littered the floor. The system simplifies inventory control and prevents loss or mix-up of the stored-bag inventory.

These bags, which received the Produce Packaging Assn's. 1956 Award of Excellence, can obviously be used for many bagging operations basically similar to carrot packaging.

**Credit:** *Polyethylene "Rolla-Bags" and dispenser by Shellmar-Bettner Flexible Packaging Div., Continental Can Co., 100 E. 42 St., New York 17.*



**Separation of single bag** from roll takes place as operator pulls perforated cut-off over specially designed key on bag dispenser. Key also pre-opens mouth of following bag. Rolls may be mounted either above or below the operator.

**Bags are filled** from moving scoops as they pass operator. Filled bags are closed with pressure-sensitive tape, then move by conveyor to packing station.

## Supermarket spectacular

A nine-color effect lends gusto to Hawaiian Pineapple Co.'s new three-dimensional display announcing the "Dole Hawaiian Harvest." Developed as a point-of-sale piece for special supermarket promotion, the corrugated display is printed in four colors. The nine-color effect was achieved through overprinting the inks. The display may be arranged in any size for floor or island use.

To catch attention and tie in with the company's current advertising campaign in printed media, the display features a large cut-out figure of a smiling man representing "Mr. Pineapple."

The display is supported by a triangular corrugated post that fits into a corrugated case attachment. This arrangement is said to be inexpensive, practical, easy to assemble and to ship, as it knocks down flat for packing. It is designed so that merchandise can be placed anywhere on the display, depending on the quantity of the canned pineapple products to be shown.

**Credit:** *Display by Container Corp. of America, 38 S. Dearborn St., Chicago 3.*

# Display Gallery

## Build-up for quart giant

By setting a three-dimensional cut-away against a background drawn from low perspective, sheer size is dramatized in a display for P. Ballantine & Sons' new quart-size flat-top beer can.

The silk-screened, die-cut panel pictures a Gargantuan male, dubbed the "Three Ring" Giant for product identification, struggling under the weight of the "Quart Giant" beer can. The giant is viewed from the level of his boots for added height. Enlarged to scale, the can reproduction is a half cylinder of paperboard extending out of the panel from the giant's hands. The display panel is mounted on the compact carton designed to hold 12 of the 32-oz. Ballantine beer cans.

Selling points stressed on the panel include the Giant Can's ability to deliver "5 full glasses, saves space and cool quickly." The quart-size beer can is also reported to take less space per ounce on dealers' shelves as well as in the consumers' refrigerators.

**Credit:** *Display by Ariston Silk Screen Process Co., 1197 McCarter Hwy., Newark 4, N. J.*

## Roman eyes light up

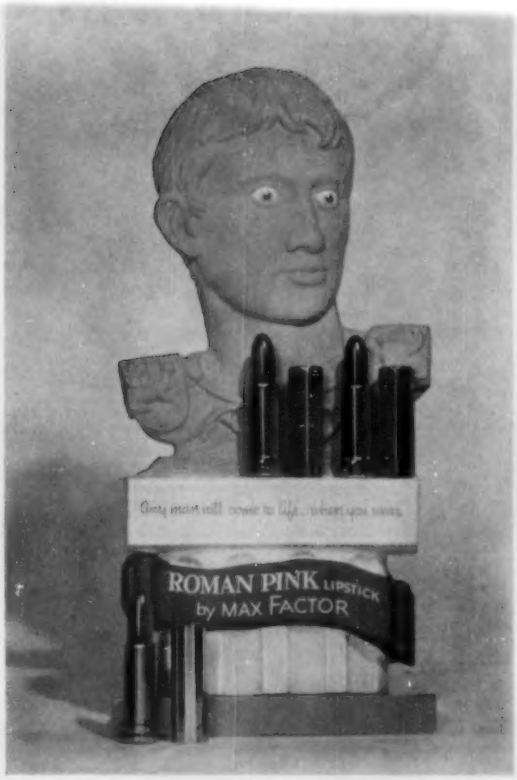
A statue that comes to life with flasher lights is an instant attention getter for Max Factor & Co.'s new Roman Pink lipsticks. The amusingly startling counter display for cosmetics departments of drug and department stores is vacuum formed in three dimensions of polystyrene sheet.

The display features the bust of a handsome Roman, whose wide-open eyes light up brightly when activated by a flasher switch. The bust is pedastaled on the platform of a classical fluted column which supports open samples of the product.

An "engraved" sales message on the platform edge combines with a product-colored banner around the column top to note that "Any man will come to life . . . when you wear Roman Pink lipstick by Max Factor."

The vacuum-formed unit is included in a promotional kit with additional printed window and counter display materials in the same theme with backgrounds of the Coliseum as featured in the company's advertising.

**Credits:** *Display by W. L. Stensgaard & Associates, Inc., 346 N. Justine St., Chicago 7, using Dow styrene sheet.*




# Display Gallery

## Convenient pull-out gives 3D in small space

Convenience to the retailer as well as to the shipper is a consideration in a small, three-dimensional display panel used by Lederle Laboratories Div. of American Cyanamid Co. to promote Gevral Vitamin Mineral Capsules in the new Jubilee Jar.

This apothecary-type glass container (see Design Histories, MODERN PACKAGING, Nov., 1956, p. 118) was designed to fit gracefully on a dining table. Lithographed on white tag stock, the display consists of a die-cut reproduction of the jar attached to the 12-by-7-in. panel so that it ships flat. A slight pull on the panel sides rounds the jar replica into shape.

Colors employed are light gray to simulate glass, blue on gold for the "jar label" and blue on yellow for sales messages which emphasize both the product and its newly designed container.

The display panel occupies only a very little space and is easily secured to any surface with pressure-sensitive tape.

**Credit:** *Display by Consolidated Lithographing Corp., Carle Place, Long Island, N. Y.*

# Automatic error-less

**Wholly automatic** meat weighing, computing and label printing: before starting to weigh chicken, operator selects commodity key from rack above labeler (center), adjusts for tare on scale and sets labeler knob to unit price. From then on she merely places package on scale and presses it against thermoplastic label ejected from labeler. Note open price book from which she reads prices for different meats and empty wrapped boats below the labeler, which are used to determine tare.

**Thermoplastic label** is pre-printed with store name and location in reverse on blue margin and trademark seals in yellow. Machine cuts label after stamping store name and meat grade (top), net weight (left), price per pound (right) in black ink, and the total value and product designation in red. Letters at the bottom of label are date code.

Two obstacles which harass supermarket management in the area of meat pre-packaging are the multiple opportunities for label-pricing errors and the shortage of skilled help on the packaging line.

These bugaboos appear to have been eliminated by a system installed in Kings Super Market, East Orange, N. J., which performs the first wholly automatic meat-weighing, computing and label-printing operation.

At Kings, a medium-sized store over whose counters an impressive 20,000 lbs. of meat pass every week, the machine also decreases labeling personnel by 1½ persons and accelerates the flow of pre-packaged meats from the butchers' blocks to the self-service counter.

### The system

Six butchers provide a continuous supply of trimmed meat cuts which are placed in paperboard boats (or trays) and moved by gravity conveyor through a small window to the wrapping room. Two girls remove the boats from the conveyors; place a non-absorbent, quality label on the meat, and fold a 200-gauge cellophane overwrap (400-gauge is

# meat labeling

*New system as used at Kings Super Market takes the guesswork out of pre-packaging; weight of the package motivates machine which discharges a completely imprinted label*

used for large, heavy cuts) about the package. The package is then conveyed through a triple-heat-seal wrapping machine. Trays of the sealed meat are then conveyed to the left of the labeling operator, whose function has now largely been reduced only to handling the package across the scale-labeler.

Under the old system this operator (during peak periods two skillful, alert operators were required) adjusted the scale for tare weight, placed the wrapped meat on the platter, selected the correct commodity key and placed it in the label printer. It was then necessary for her to read the total weight, punch it out on the label printer, compute the price from the scale and punch that and the price per pound out on the printer. She then removed the label and placed it on the package, using a hand sealing iron. These operations were repeated for every weighing and contained several potential error areas.

With the new system, having inserted the correct commodity key, adjusted for tare weight and set the price per pound, the operator need only place the package on the platter, remove and press it against the immediately ejected thermoplastic label. Scale reading is unnecessary and there are no keys to be punched or further adjustments so long as the meat type and tare are unchanged.

Actually this is an over-simplification of the machine's operation because of the innumerable built-in safeguards to prevent inaccurate label printing.

To start weighing a new lot of products, the operator releases a commodity insert lock and removes the previous commodity printing insert. The correct commodity printing insert is selected from a rack and placed in the machine. The price per pound of the new commodity is then set on the knobs and the tare weight is offset by means of the tare knob and the weight dials on the scale.

With these three set-up operations completed, weighing is started by placing the package on the platter. At this time, a green light on the scale, which has been on, will go out and remain out until the scale has come to balance and remained in balance for about ¼-second. When this true balance has been obtained (not before) the computer will receive the total weight message from the scale, the green light will come on again and the package can be removed, replaced with a second package, and

**Operation starts** in refrigerator from where six butchers cut and trim meat and place each portion in a paperboard boat. The open packages are then conveyed through the window visible at the right directly to the wrapping room.

**Wrapping machine** (center) is fed by conveyor line at the right. After being heat sealed, packages are ejected into tote boxes in foreground and fed by gravity conveyors on the left to automatic label printer (back). Approximate speed of this operation is 20 packages per minute.

the scale then starts weighing the second package while the printer is producing a label for the first.

This printed label is issued and is then held by the ejector until the operator is ready for it. Until such time as the label is removed, the computer is prevented from starting on its next operation. If during this time the scale has come to a true balance, the green light will remain unlit, but, when the previous label is removed, the light will go on, the package can again be replaced and the third weighing and second computation will be started.

Thus the weighing takes place as the operator is handling the previous package, with no effort on her part except to watch for the green light and handle the packages accordingly. If the package is removed before the green light comes on, there is no operation of the computer and thus no label is produced. The package can then be reweighed.

**Meats are stacked** by labeler operator in refrigerated self-service counters. Kings Super Market can compete with large national chains because of its quality meats and superior packaging.

There is a repeat switch for use in labeling a number of predetermined, standard-weight packages, such as pre-packaged bacon.

The printing operation will be prevented and an error signal will light if the start button is pressed with the scale in balance at a position back of or below zero, or if a weight is placed on the scale in excess of 24.99 lbs. The error signal is also touched off if the price-setting knobs are moved during the computation, or the price-setting knobs have been moved since the last computation and an attempt is made to obtain repeat labels.

A change-price light is also provided on the labeler and this and the error light will both come on and the printing operation automatically stop if the price-setting knobs are set in between the correct settings or if the price-setting knobs aren't operated after the commodity printing inserts have been changed. When the error light comes on, any further operation is prevented until the error condition is corrected and a reset button is pressed. A third red light on the labeler is provided to warn that the paper supply is running low.

### The machine

The equipment consists of three separate units—a scale, a computer and a labeler. These units are mechanically separate, connected to each other by flexible cables. Because of this three-unit construction, the system is exceedingly flexible so that it can be installed in the manner most convenient to the user. That is, it can be set up for a right-to-left operation, a left-to-right operation or, if space is limited, the computer can be placed in a remote location. Kings has its computer out of sight under a table to the left of the scale-printer.

The scale weighs and expresses its result in terms of pounds and hundredths of a pound, and in its operation delivers to the computer the weight information to the nearest hundreth of a pound, splitting the half hundreth. In this system the computed value is the result of the weight to the nearest hundreth of a pound multiplied directly by the price per pound, then expressed to the nearest penny. This permits Kings, the customer and the weights-and-measures official to verify the computations without having first to convert the ounces to fractions and "round off" that result.

The labeler prints the entire variable information, including the store name, the net weight, the price per pound, the total value of the package, the name of the commodity, the U. S. Grade, if desired, and a two-letter code that can be used to indicate date, operator or other data.

Two ejectors for automatically issuing the label are available. Kings uses the heat-seal type which receives the label face down on a thermostatically controlled hotplate which activates the heat-sensitive adhesive. The label is held in place by a small retractable guard and the [*Continued on page 227*]

**Credits:** *Hobart-Dayton "2000" weighing, computing, printing and label-issuing system manufactured by The Hobart Mfg. Co., Troy, Ohio. Labels and seals by Paramount Paper Products Co., 4401 N. 23 St., Omaha 10, Neb. Wrapping machine by Wrapping Machinery Co., Franksville, Wis.*

# *Another prestige product packaged by Burt*

Slide boxes
manufactured
for Benson & Hedges,
New York

F. N. Burt Company Inc. - Manufacturers of Small Set-up Boxes, Folding Cartons and Transparent Containers - 500-540 Seneca Street, Buffalo 4, New York - Offices in Principal Cities Or Write Direct - Canadian Division: Dominion Paper Box Co. Ltd., 469-483 King St. W., Toronto, Canada

# 1957 Folding Box Awards

*Twenty-two top winners out of a record 9,123 entries reflect the past year's high quality of design and construction in annual competition of the Folding Paper Box Assn.*

A whopping 30% increase over last year's entries, setting a new peak, highlighted the 1957 Folding Carton Competition, sponsored by the Folding Paper Box Assn. of America.

The 22 First Awards in 21 categories and 79 Awards of Merit were announced on April 1 at the association's annual meeting, held at the Drake Hotel, Chicago, March 31 to April 3.

The 1957 entries totaled 9,123, which represented 148 individual member companies. These figures compared with the 1956 totals of 7,027 and 132, respectively, previous highs for the competition. Four groups of judges named the top awards and merit awards in the contest's various categories.

The two categories which reflected the greatest growth in number of entries were the end-use classifications of Hardware, Appliances, Automotive Supplies (continuing a pattern of the last two years) and Sporting Goods and Toys.

Receiving particular emphasis this year was the FPBAA's effort to credit professional packaging designers for the important role they play in helping to create better folding cartons. Most awards credited the designer, where an independent designer could be identified.

The increased quantity and excellent quality of the boxes in the Folding Carton Competition reflect the importance accorded to packaging by manufac-

## Technical superiority of printing

**Best letterpress printing, one- or two-color.** A black and gold display holding 12 cartons of Abbott Laboratories' Dayamineral tablets, made by Acme Paper Box Co., Chicago. Feature of display unit is a flap on back panel, constructed to be pilferproof, that holds one exposed bottle. Entire display is shipped in an unprinted 0.024 bending chip sleeve. Quiet dignity reflected in the wise choice of type won judges' approval of this entry, which also won a Merit Award in competition's *Medicinal* end-use category.

**Best gravure printing.** Seven four-color illustrated cartons showing bakery end uses of Dixie Crystals sugar were printed on white patent-coated stock by the Robert Gair Div., Continental Can Co., Inc., New York, for Savannah Sugar Refining Corp. and designed by Raymond Loewy Associates, Inc. They have a special reclosure feature and a moistureproof liner.

Ltd., 469-483 King St. W., Toronto, Canada.

## Superiority of construction

**Simulated silver chest** developed for Branchell stainless tableware by Gereke-Allen Carton Co., Div. of Eddy Paper Corp., won top award for Superiority of Construction. Carton appeals both as a gift item and for impulse sales, effectively displays merchandise, protects contents during and after shipment and suggests quality through its quiet and dignified design. This hinged box also won a Merit Award in the *One- or Two-Color Letterpress Printing* category.

## New use

**Ingenious Christmas tree ornaments** by Norse Craft, Inc., took first award for the best example of potential new volume use for products of the folding paper box industry. Attractive, safe to handle and non-breakable, these reverse-tuck ornaments are packaged flat in a tube and sleeve. Both packer and ornaments are printed in four colors, the latter on silver-colored foil newsback. The packers and ornaments are made by the Robert Gair Div., Continental Can Co., Inc., New York, and designed by Von der Lancken & Lundquist.

turers, states the FPBAA. Consumer-goods suppliers are "thinking retail" to answer the retailers' demands for creative packages that will be effective in self selection and mass display.

The growing wave of new products and lines has put a high premium on display areas, amounting to $128 a lineal foot of shelf space in food stores. This has made effective carton packaging a major factor in obtaining and retaining sales.

The FPBAA further points out that product manufacturers and box makers are gearing packaging to the prediction that self service and self selection will account for almost half the total sales in one out of three stores by 1960. It also notes four trends:

1. Increasing use of multicolor packages and much wider use of color photos showing end uses of products, particularly in foods.
2. Catering to consumers' wishes and anticipating

**Best offset lithographic printing.** This self-promotion Christmas gift of a double pack of playing cards, made and distributed by The U. S. Printing & Lithograph Co., Cincinnati, and designed by Sales Art Studios, was printed in six colors and varnished. It provides subtle company identity, is an attractive gift, promotes the company's service and quality as a printer and manufacturer of packaging materials. Full-color reproduction of the baby girl is part of a current advertising theme, "Color Printing is Our Baby."

**Best letterpress printing, multicolor.** Three-color, varnished carton, made by Container Corp. of America, Chicago, for quart gift decanter of Manischewitz wine was designed to compete with more expensive liquor decanters and gift cartons. It bears a minimum of copy. Features are special full flap, auto bottom with double Jones lock top, die-cut window for product identity. Carton received a Merit Award for *Beverages.*

them. This is reflected by easy openers, multipacks and gift boxes.

3. Accelerating trend of self-service packages in hardware. Colorful packages are replacing items formerly binned.

4. Growing use of packaging in textiles. Cartons in this area are serving as storage containers, promote multiple sales and often have excellent gift appeal.

Underlying qualities on which the 1957 FPBAA winners were judged include seven essentials of modern packaging: (1) protection, (2) identification, (3) selling information, (4) multiple-sales units, (5) convenience features, (6) related-item sets and (7) impulse-sales merchandising through good packaging.

Underscoring the increased quality and quantities of entries in this year's contest is the fact that no one carton earned more than one first award, though several received both a First Award and one or more Awards of Merit in other categories. This year the *Paraffin Carton* category was deleted and the judges considered no carton deserving of a First Award in two categories—*Flexographic Printing* and *Bakery Goods*.

To qualify for the 1957 contest, all entries must have been produced for the first time in 1956 (actually shipped from the manufacturer to the customer after Jan. 1, 1956) and all operations in the manufacture of an entry must have been performed by the submitting member.

Winners of the 22 first awards in the four classifications are identified in the pictures and captions herewith.

### Awards of Merit

Folding cartons winning Awards of Merit in the four classifications were:

**Technical superiority of printing.** *Best Letterpress Printing, One- or Two-Color:* Branchell Stainless Steel Tableware for The Branchell Co., box by Gereke-Allen Carton Co., Div. of The Eddy Paper Corp. Hexachlorophene Hand Soap for Armour & Co., box by The Ohio Boxboard Co. Devlin Ladies' Shoes for The Frank Roe Corp., box by The Pinkerton Folding Box Co.

*Multicolor Letterpress:* Ekco Kitchen Tool Set for the Ekco Products Co., box by Container Corp. of America. Cannon Towel Gift Set for the Cannon Mills, box by the Continental Can Co., Inc., Robert Gair Div. Early Bird Feeder for The Early & Daniel Co., Inc., box by The Gardner Board & Carton Co. Accents for Jantzen, Inc., box by The Gardner Board & Carton Co. Conquest Perfume for Dorothy Perkins Co., box by Mott Carton & Paper Co. Lilt Home Permanents for Procter & Gamble Co., box

## Winners in

**Medicinal products.** Sharp & Dohme, Div. of Merck & Co., Mulsavite capsule bottles in multiple display carton, made by Edwin J. Schoettle Co., Inc., Philadelphia. Three-color, varnished carton breaks into three units. Designed to appeal to children and gain better drug-counter space, it also won Merit Awards for *Display* and *Construction*.

**Food.** Lime cartons for Calavo Growers of California; display carton made by Andre Paper Box Co., San Leandro, Calif., and individual carton made by Standard Paper Box Corp., Los Angeles; design by Lloyd Wallace. Package is aimed to induce grocers to stock more fresh limes and broaden distribution to drug and liquor stores.

**Textiles (tie award).** Two cartons for Interwoven Stocking Co., made by Container Corp. of America, Chicago. Designed for gift appeal and impulse buying, both have special die-cut inserts to hold tie and socks in position. Identical in construction, they differ only in design and number of colors used.

**Displays.** Rawl Engineering & Mfg. Co., Inc.'s novelty jewelry in "Polly Ann" gift and gadget bar, made by National Folding Box Div., Federal Paper Board Co., Inc., New Haven, Conn.; design, Lewis W. Richards. This three-part display has more than doubled sales of the products.

designed to compete with more expensive liquor decanters and gift cartons. It bears a minimum of copy. Features are special full flap, auto bottom with double Jones lock top, die-cut window for product identity. Carton received a Merit Award for *Beverages*.

## fifteen end-use categories

**Cosmetics and personal accessories.** Tied for first place were Personal Products Corp.'s Modess sanitary belt carton, made by F. N. Burt Co., Inc., Buffalo, N. Y., designed by Chuck Majors, and the J. B. Williams Co.'s Aqua Velva Lotion carton, made by Container Corp. of America, Chicago, and designed by Donald Deskey Associates. The six-color Modess carton features advertising identification. The blue and silver foil carton for Aqua Velva also won top recognition in the Package Designers Council competition.

**Soap.** White Magic Soap carton, made for Newport Products Co. (Safeway Stores) by Paperbox Corp., Oakland, Calif., and designed by Saul Bass. It differs from other cartons in this competitive field. Close register of pastel colors achieves soft effect.

**Confections:** Family of window cartons for Blumenthal Bros. Chocolate Co.'s BB candies, made by Chicago Carton Co., Chicago. Family identity is maintained by an identifying color for the six different candies in three-color-printed, cellophane-windowed cartons.

**Tobacco.** Family of window cartons for Kaywoodie pipes by S. M. Frank & Co., Inc., Kaywoodie Div.; made by William W. Fitzhugh, Inc., New York. Cartons all use same gold-colored foil tray, with different sleeves. Various shapes of pipes fit in one carton size.

**Hardware.** J. Wiss & Sons Co.'s Wiss V-19 Snips carton, made by Sample-Durick Co., Inc., Chicopee, Mass.; design, Lester Beall. Sheath conforms to contour of snips and can be hung on a pegboard.

**Retail.** Macy's of San Francisco retail boxes, made by Andre Paper Box Co., San Leandro. Artistic carton depicts interesting city landmarks in pen-and-ink drawings. Outer surface is printed on web by flexography, laminated to kraft, then sheeted to predetermined sizes for die cutting and creasing presses.

**Beverages.** Smirnoff Vodka gift carton for Heublein, Inc., made by Robertson Paper Box Co., Inc., Montville, Conn. A unique effect, as well as economy, is attained through use of labels applied to cartons at customer's plant.

**Carriers.** Country Club Beer carton for M. K. Goetz Brewing Co., made by Robert Gair Div., Continental Can Co., Inc., New York; design, Lippincott & Margulies. Contains six 12-oz., no-deposit bottles, has sturdy carrying handle.

**Toys and sporting goods.** Merry Mfg. Co., Inc.'s "My Merry Dolly's" family of cartons, made by U. S. Printing & Lithograph Co., Cincinnati; design, A. O. Greule. Hinged cartons have built-in sleeves that hold toy brand-name household aids.

**Miscellaneous.** Chimney Sweep Fireplace Powder carton for G. N. Coughlan Co., made by Robert Gair Div., Continental Can Co., Inc., New York. Designed for impulse buying, carton-display holder amply describes the product and its functions.

**Paper products.** Shuford's Shurtape family of cartons for Shuford Mills, Inc., made by Sutherland Paper Co., Kalamazoo, Mich. Cartons for new line of tapes have a two-color tape motif.

by The Richardson Taylor-Globe Corp. Serpasil Elixir for Ciba Pharmaceutical Products, Inc., box by The Sparks Corp. New Artist Paint Set for Palmer-Pann Corp., box by Sutherland Paper Co.

*Best Flexographic Printing:* Coors Beer for Adolph Coors Co., box by Andre Paper Box Co. Colman's Retail Box for Colman's, box by Andre Paper Box Co.

*Best Gravure Printing:* Alcoa Wrap for Aluminum Co. of America, box by The Bradley & Gilbert Co. Norse Craft Ornaments for Norse Craft, Inc., box by Continental Can Co., Inc., Robert Gair Div. Alcoa Wrap for Aluminum Co. of America, box by the Gardner Board & Carton Co. Alcoa Wrap for Aluminum Co. of America, box by The Ohio Boxboard Co. Economy King "All" for Monsanto Chemical Co., box by The Ohio Boxboard Co.

*Best Offset Lithographic Printing:* Lady Marion Hostess Ensemble for Marion's of California, box by Ace Carton Corp. of California. Pillsbury Mills Mixes family for Pillsbury Mills, Inc., box by Ace Folding Box Corp. Kool-Aid display for Perkins Div., General Foods Corp., box by Container Corp. of America. Dixie Fry for Prepared Products Co., Inc., box by Fleishhacker Paper Box Co. Avon soap family for Avon Products, Inc., box by The Lord Baltimore Press, Inc. Old Forrester decanter for Brown-Forman Distillers, box by The Lord Baltimore Press, Inc. Four Roses whiskey and gin family for Four Roses Distilling Co., box by The Lord Baltimore Press, Inc. Duncan Hines Chiffon Cake Mix for Procter & Gamble Co., box by The Lord Baltimore Press, Inc. Brownie Starflash Camera for Eastman Kodak Co., box by the Rochester Folding Box Co. Tru-Cold plastic containers for Kordite Co. for Montgomery Ward, box by Rochester Folding Box Co. Wiss cutlery family for J. Wiss & Sons Co., box by Sample-Durick Co., Inc. Hit Parade cigarettes for American Tobacco Co., box by The U. S. Printing & Lithograph Co. Lindberg Plastic Model Airplane kits for Boy Craft Co., box by The U. S. Printing & Lithograph [*Continued on page 196*]

## Graphic Arts' '50 Packages of the Year'

A new activity to give recognition to outstanding packaging has been established by the American Institute of Graphic Arts as the "50 Packages of the Year," which AIGA hopes to make one of its annual events.

Selections are determined on the basis of quality of design, typography and presswork, and are limited to folding cartons and shipping containers "which most successfully integrate originality of conception and excellence of execution."

On exhibit for a period of two weeks beginning April 8, at the Willkie Memorial Building of Freedom House, 20 W. 40 St., New York, the 50 packages and the accompanying selection of 50 Record Album Covers of the Year will also appear in traveling exhibitions sponsored by industrial firms and institutions.

Complete data on the 50 Packages of the Year are to be prepared in a catalog published by AIGA, 5 E. 40 St., New York 16.

It is noteworthy that seven of AIGA's 50 packages also won first awards in the Third American Package Design Competition* sponsored by the Package Designers Council. These are the Aqua Velva shave lotion box, Santa Fe Pet Carrier, Stop & Shop bakery box, Early Times gift cartons for wine and spirits, Lucent Dinnerware display carton, Serpasil sampling unit and Wiss Steel Snip package. Aqua Velva and Wiss were also winners in the Folding Paper Box Assn.'s 1957 competition.†

Though entries were limited to folding cartons and shipping containers for home consumption of mass-produced consumer merchandise in 17 categories, they could be submitted by anyone involved in use or production of the package.

Sears, Roebuck & Co. designed for its own use four of the packages picked by AIGA: Harmony House Gift Bath and Towel sets, J. C. Higgins golf ball carton and Allstate Seat Cover carton.

Users with two packages each in the exhibit included Abbott Laboratories, Stitzel-Weller Distillery, G.H.P. Cigar Co., Brown-Forman Distillers Corp., Avon Products, Inc., and J. Wiss & Sons Co.

Further selections included six entries by Walter Landor & Associates, five from Container Corp. of America; four each from Design Associates, Inc., and Raymond Loewy Associates; three each from the Robert Gair Div. of Continental Can Co., Inc., and Lester Beall, and two each from Donald Deskey Associates and Paul Rand.

Judges were Walter Landor, Walter Landor & Associates; Albert Kner, director, Design Laboratory, Container Corp. of America; Dr. Ernest Dichter, president, Institute for Motivational Research, and Edgar Kaufman, Jr., formerly with the New York Museum of Modern Art.

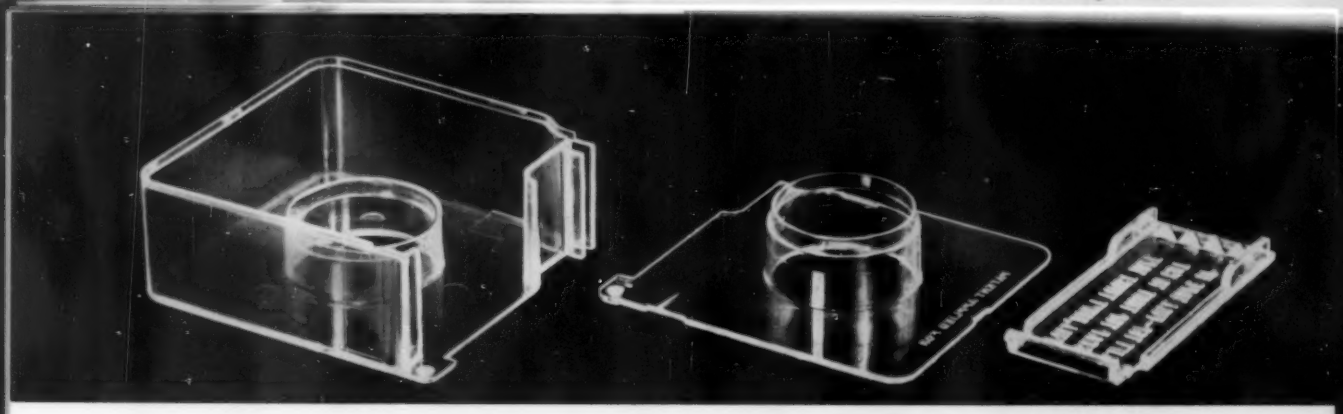
*See "Package Designers' Winners," MODERN PACKAGING, Feb., 1957, p. 87.

†See "1957 Folding Box Awards," MODERN PACKAGING, April, 1957, p. 126.

cinnati; design, A. O. Greule. Hinged cartons have built-in sleeves that hold toy brand-name household aids.

York. Designed for impulse buying, carton-display holder amply describes the product and its functions.

Co., Kalamazoo, Mich. Cartons for new line of tapes have a two-color tape motif.



Federal Tool Corp., Chicago 45, Ill., molds these packages for Bauer & Black, Division of the Kendall Company, Chicago 6, Ill.

*How 3 types of packaging utilize BAKELITE Brand Plastics to*

# Meet specific product needs

It's easy to spot the advantages in this adhesive tape dispenser box made entirely of BAKELITE Brand Styrene Plastic. The lid, intricately molded with hinge pins, teeth, and operating instructions, cuts the tape with a snap. The whole box has a clean, jewel-like clarity that sets off the contents. Two of its sides are shaped to form a rigid core that holds the spool firmly in place. The design of the box is ideal for display stacking.

An equally effective sales-winning design for your package might well be based on the properties of BAKELITE Styrene Plastic. Ask your packaging supplier.

(continued on next page)

# Meet specific product needs

( continued from preceding page )

## *Small parts and tools protected yet visible in polyethylene bags*

The strength, visibility, printability, and economy of film made of BAKELITE Brand Polyethylene make it a superior material for packaging industrial goods.

"Whether in our own inventory or in customers' tool cribs, the visibility of contents in a polyethylene bag is a valuable time saver," reports William A. Burns, sales manager, Zephyr Manufacturing Company, Inc., Inglewood, Calif. "And polyethylene provides this see-through in addition to its greater resistance to tearing by edges of sharp tools and parts, and ample protection against moisture. We like the printability of polyethylene. It keeps our name and trade-mark in front of users. And in addition to all its other advantages, polyethylene bags cost us less."

(continued on next page)

## *Polyethylene packaging for General Mills "...assures strength plus moisture-proofing"*

Before General Mills startled the industry with the introduction of their new Betty Crocker Answer Cake Mix, the 6-serving cake packaged with its own baking pan, they were "faced with a definite permeability problem."

According to Clarence E. Felt, head of General Mills Packaging Department, "... we could get a moisture barrier of sorts with other materials, but they simply could not stand up under the rigors of normal merchandising. The use of polyethylene-foil liner for the printed paper pouches provides strength, assured heat-seal, plus moisture-proofing in order to guarantee the same quality product on the grocer's shelf and in the consumer's home that we compound under our controlled plant production."

## *First in the world of plastics...*

BAKELITE BRAND PLASTICS

Ask your packaging supplier to describe some of the more recent developments in packaging with BAKELITE Brand Polyethylene. Several of them may hold important benefits for your product. For a copy of our "1957 Guide to Improved Packaging," write Dept. WX-105.

**BAKELITE COMPANY,** *A Division of Union Carbide and Carbon Corporation* UCC 30 East 42nd Street, New York 17, N. Y.
*In Canada:* Bakelite Company, Division of Union Carbide Canada Limited, Belleville, Ontario
The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC.

## BEST SELLING NURSERY PRODUCTS USE ALCOA WRAP PACKAGING

*Sparkling Alcoa Wrap aluminum foil gives plants gleaming new "pick-me-up" sales appeal . . . dresses up drab clay flower pots, too*

Alcoa® Wrap makes a compact package that's easy to ship, stock and handle. It protects against heat . . . retards premature sprouting . . . seals in moisture till planting time.

**DRESS UP YOUR PRODUCT**—Alcoa doesn't make packages, but teams with America's top converters. You get top facilities, know-how, and service all along the line. Call your converter—get today's finest packaging . . . Alcoa Wrap.

*You're always ahead with Alcoa*
*. . . greatest name in aluminum*

In Canada: Bakelite Company, Division of Union Carbide Canada Limited, Belleville, Ontario
The term BAKELITE and the Trefoil Symbol are registered trade-marks of UCC.

# Quart-size squeeze can

*Renuzit finds tall, slim lines of the large container offer sales pull and ease of use for its new liquid cleaner*

The first product reported to be packaged in a quart-size polyethylene squeeze can is Gentle, a new liquid cleaner being introduced to the trade this spring by Renuzit Home Products Co., Philadelphia.

Chief reason given for selection of the larger-sized container is to provide a more practical sales unit for a liquid cleaning product recommended for rugs, upholstery and clothing, which usually require larger-quantity applications than dish-washing detergents.

Taller and slimmer than conventional, all-metal detergent cans of the same capacity, the 32-oz. squeeze can is $9\frac{1}{16}$ in. high over-all and has a diameter of $3\frac{3}{16}$ in., the same as that of a 22-oz. squeeze can. Renuzit believes the taller container gives a better size impression on the grocery-store shelf. Diameter of the 22-oz. squeeze can was retained to make the quart-size container easy for a housewife to squeeze as she applies the new cleaner.

The 32-oz. squeeze can for Gentle has a white polyethylene body (wall thickness 0.032 in.) and ends of tinplate coated with baked white enamel. A molded one-piece polyethylene plug with 0.090-in. orifice and captive cap seals the filling opening. A gentle squeeze on the package releases enough Gentle for the average cleaning job, the company reports. Three-color printing on the white polyethylene with magenta, black and mustard inks produces a clean and open design.

Compactness, light weight and resistance of the 32-oz. squeeze can to breaking and crushing were also important factors in selecting the package.

Attention of the trade is being called to the new large-sized squeeze can in the company's promotional material describing its advantages.

**Credit:** *Container by Bradley Container Corp., Maynard, Mass. Corrugated carton by International Paper Co., Container Div., 220 E. 42 St., New York.*

**Handy to use,** new 32-oz. squeeze can has same diameter as 22-oz. size. It delivers liquid contents with a gentle squeeze of the walls.

**Colorful shipper** for 12 quart-size squeeze cans of Gentle liquid cleaner is printed in three colors—magenta, black and mustard inks—on white corrugated to match colors of product containers.

***Marathon designers,*** printers and engravers put the "what shoppers prefer" into every food package.

***They buy by eye*** and the Man from Marathon knows why. See him soon.

# the Man from Marathon Knows

## which food packages catch her eye

Why does she pick up certain food packages, pass up others? The Man from Marathon who calls on you has the answer.

He has interviewed thousands of shoppers in food stores all over the country . . . tape-recorded their "reasons why" *right after* they buy. In addition, Marathon candid cameras "catch 'em in the act" of picking out the preferred package.

The result of Marathon's point-of-purchase merchandising research? *Packages that sell more* BAKED FOODS, FROZEN FOODS, DAIRY PRODUCTS and MEATS.

***Why not interview the Man from Marathon,*** **let him tell you what he knows about shopper buying habits? Or write: Marathon Corporation, Dept. 202, Menasha, Wisconsin. In Canada: Marathon Packages Limited, Toronto.**

**MARATHON PACKAGES**

SELL BRANDS • PROTECT PRODUCTS • SPEED PRODUCTION

# Higher-density polyethylene

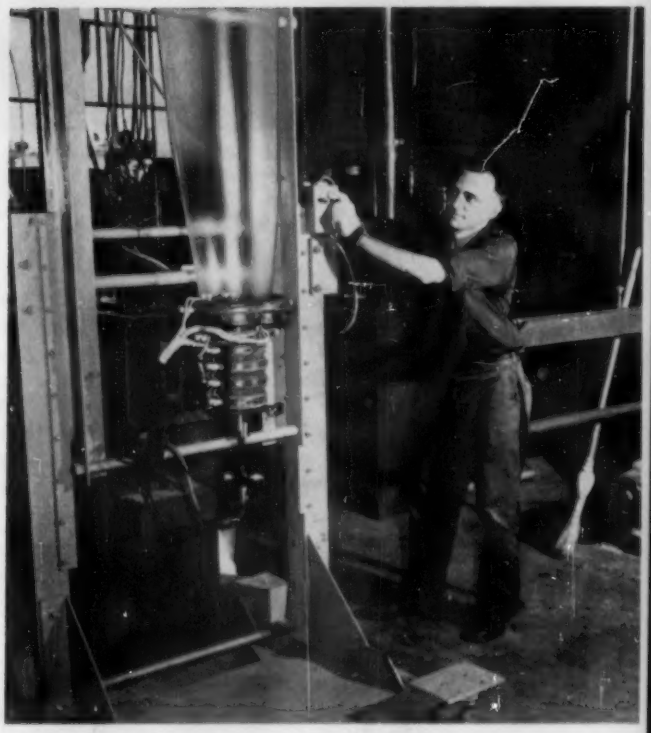
*Resin made by new process on high-pressure equipment produces film with boilability and might give necessary stiffness for machine handling and wrapping*

*By Kenneth A. Kaufmann**

Two limitations of conventional polyethylene film for certain packaging uses—inability to be boiled and lack of stiffness—may well be overcome through the use of new higher-density, high-pressure polyethylene.

A resin of this type compares favorably in density with many polyethylenes made by the low-pressure process. Film made from the resin is stiffer, less permeable to gases and water vapor, and more resistant to greases than conventional polyethylene film. It also exhibits high clarity, improved gloss, higher yield strength and ease of heat sealing and printing. It has superior slip characteristics without lubrication and will not block—thus improving operation of automatic bag-making machinery and allowing easy opening in the packaging operation. Like conventional polyethylene, it is completely non-toxic and odorless.

The increased heat resistance of this material permits the packaging of frozen foodstuffs and subsequent boiling in the film before serving. Increased stiffness means improved bag making and it also



**Extrusion equipment** producing Hi-D polyethylene film at commercial rates permits the laboratory to appraise the resin's processability and to provide samples for further analysis.

**This is the first technical report on a new type of polyethylene film that promises to be of considerable interest to packaging. The resin, which achieves higher density in the otherwise-conventional high-pressure production process, is not to be confused with the so-called low-pressure resins, also now coming into production, which exhibit some similar properties.**

* Manager, Plastics Laboratory, Spencer Chemical Co., Kansas City, Mo.

**Boiling lunch in the laboratory!** Sealed packages of shrimp and carrots are being boiled to measure Hi-D polyethylene film's possible application in the field of boilable packaging.

offers the possibility of mechanical overwrapping.

One such high-density, high-pressure polyethylene resin is now being produced by Spencer Chemical Co. and is commercially available under the designation of Poly-Eth Hi-D[1]. The resin has a density of 0.938, in comparison with those made by the low-pressure processes which range from 0.940 to 0.960. It is now being extruded into film commercially.

### Film properties

Spencer Hi-D 2504 was extruded into blown tubular film and flat film at commercial rates on a 2½-in. National Rubber extruder and compared with Spencer 2405 (intermediate-density, high-clarity film grade) and 2205 (conventional density and clarity) formulations made on the same equipment. Blow-up ratios (tube diameter/die diameter) of three to one were used in all blown-film opera-

[1] "Poly-Eth" and "Hi-D" are trademarks of Spencer Chemical Co.

**Table I: Comparison of film properties of conventional density, intermediate density polyethylene and Spencer Hi-D (1¼-mil film)**

| *Property* | *Units* | *ASTM test method* | *Blown film* | | | *Flat film* | | |
|---|---|---|---|---|---|---|---|---|
| | | | *Hi-D 2504** | *Int. dens. 2405** | *Conv. dens. 2205** | *Hi-D 2504** | *Int. dens. 2405** | *Conv. dens. 2205** |
| Specific gravity | | D792-50 | 0.938 | 0.925 | 0.915 | 0.938 | 0.925 | 0.915 |
| Melt index | Gms./10 min. | D1238-52T | 1.0 | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 |
| Vicat softening point | °F | Proposed | 235° | 212° | 194° | 235° | 212° | 194° |
| *Ultimate tensile strength* | p.s.i. | D882-49T | | | | | | |
| Machine direction | | | 3050 | 2900 | 2800 | 4200 | 3650 | 3175 |
| Transverse direction | | | 3575 | 3300 | 3100 | 2100 | 2350 | 2625 |
| *Yield tensile strength* | p.s.i. | D882-49T | | | | | | |
| Machine direction | | | 1925 | 1450 | 900 | 1850 | 1500 | 1225 |
| Transverse direction | | | 2075 | 1575 | 950 | 1925 | 1300 | 850 |
| *Ultimate elongation* | p.s.i. | D882-49T | | | | | | |
| Machine direction | | | 575 | 600 | 630 | 325 | 375 | 425 |
| Transverse direction | | | 675 | 700 | 725 | 600 | 650 | 700 |
| *Tear strength, Elmendorf* | Gms./mil | D689-44 | | | | | | |
| Machine direction | | (mod.) | 95 | 200 | 300 | 25 | 50 | 60 |
| Transverse direction | | | 80 | 175 | 275 | 175 | 200 | 250 |
| Impact strength | p.s.i. | (a) | 1900 | 2000 | 2400 | 1150 | 1875 | 2200 |
| Coefficient of friction | —— | (b) | 0.50 | 0.85 | 71.0 | 0.65 | 0.90 | >1.0 |
| Block | Gms. | (c) | none | 100 | 300 | — | — | — |
| Clarity, relative | 11—best | | | | | | | |
| | 1—worst | (d) | 10 | 11 | 7 | 9 | 11 | 8 |
| $CO_2$ permeability | cc./100 in.²/ | | | | | | | |
| (2-mil film) | 24 hrs./atm. | (e) | | | | 994 | 1350 | 2510 |
| $O_2$ permeability | 24 hrs./atm. | (e) | | | | 286 | 324 | 687 |
| Water-vapor transmission | Gms./24 hrs./100 in. | | | | | | | |
| | @100°F. & 100% RH | (f) | | | | 0.637 | 0.812 | 1.16 |
| Greaseproofness | Aug hrs. to fail | Mil-B-121 | | | | | | |
| | | (mod.) | | | | >24 | 18 | 6.5 |
| Heat sealability | | | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |
| Printability | | | Excellent | Excellent | Excellent | Excellent | Excellent | Excellent |

* Spencer formulation numbers.
(a) Spencer impact tester, pendulum spherical puncture-head type (modified Elmendorf tear tester).
(b) Moving film, stationary sled-type tester.
(c) Maximum normal separation force required to unblock a 4-by-4-in. area.
(d) See through; line number readable on standard eye chart adjusted for observer visual acuity.
(e) Aminco-Warburg gas-permeability apparatus used at 30°C. and one atmosphere pressure differential.
(f) Measured at 100°F., 100% RH one side, 0% RH other side.

**Table II:** Comparative physical properties of Poly-Eth Hi-D and conventional polyethylene resins

| *Property* | *Units* | *ASTM test method* | *Poly-Eth Hi-D* | *Conventional polyethylene* | *Low-pressure polyethylene* |
|---|---|---|---|---|---|
| Specific gravity | Gms./cc. | D-792-50 | 0.938 | 0.915 | 0.94 - 0.96 |
| Melt index | Gms./10 min. | D1238-52-T | 1.0 | 1.0 | 0.6 |
| Ultimate tensile strength | p.s.i. | D412-51T | 2300 | 1850 | 3000 |
| Yield tensile strength | p.s.i. | D412-51T | 2300 | 1200 | 3000 |
| Elongation | % | D412-51T | 400 | 575 | <100 |
| Stiffness, 73°F. | p.s.i. | D747-50 | 54,000 | 16,300 | 80,000 - 140,000 |
| Hardness, Shore | | D676-49T | D57 | D44 | D60 - D65 |
| Softening point, Vicat | °F. | Proposed | 235 | 200 | 245 |
| Brittleness temperature | °F. | D746-52T | <-100 | <-100 | <-100 |
| Impact strength, notched Izod, 73°F. | Ft. lbs./in. of notch | D256-54T | No breaks | No breaks | Breaks 3.0 |
| Power factor | | D150-47T | <0.0003 | <0.0003 | — |
| Dielectric constant | | D150-47T | 2.3 | 2.3 | — |

tions. Comparative data obtained appear in Table I. All three materials are non-lubricated grades.

The high-density material has extraordinarily good heat resistance and good tensile properties in comparison with the conventional 2205 and the intermediate density of 2405 is midway between. Elongation is only insignificantly diminished. Tear strength, as measured by the Elmendorf method using single thicknesses, decreases as density increases. When measured by the Graves test (ASTM D1004-49T), however, the reverse is true. Impact strength also diminishes slightly with higher density. It may be said then that the toughness of the high-density film is less than that of conventional polyethylene and it will be used in applications, of course, which do not require the extreme toughness of normal polyethylene. The high-density film, however, is superior to most low-pressure polyethylenes in this regard.

Coefficient of friction data show the high-density film in the unlubricated state to be much superior in slip properties to conventional polyethylenes. By comparison, most high-slip lubricated polyethylenes give coefficient of friction values of 0.25 with this test, while medium-lubricated materials generally show a value equal to the high density, or 0.50. Because of the greater stiffness of the high-density film, less actual slip is required in bag-making operations for equivalent speed. Thus the 0.50 coefficient figure, in comparison with the 0.25 of high-slip materials and 0.50 of medium-slip polyethylenes, is somewhat misleading. This higher stiffness of the high-density film is illustrated in the high-density resin properties shown in Table II. It is seen that the film has three times the stiffness of conventional polyethylene, while retaining impact resistance not found in low-pressure polyethylenes. In the notched Izod test, low-pressure materials normally break, while the high-density resin, like conventional polyethylene, does not. This stiffness suggests the long-awaited possibility of polyethylene overwrapping. Studies on this subject are going forward at the present time.

Similarly Table I shows that block is non-existent with the high-density film, while an objectionable amount occurs with conventional non-lubricated polyethylene. With this particular test, 125 gms. of blocking force is the maximum acceptable for easy opening in today's market.

The clarity data show Hi-D to be almost equivalent to Spencer 2405, a resin specifically designed

**Clarity test** demonstrates clearness of Hi-D film. Using standard American Optical No. 1930 eye chart, operator finds distance at which he can just see bottom line. He places the film about 2 in. in front of his eyes, notes lowest line he can read.

**Table III:** Optimum extrusion conditions and drawability of Poly-Eth Hi-D film vs. intermediate and normal-density materials*

| | Units | Blown film Hi-D 2504 | Blown film Int. dens. 2405 | Blown film Conv. dens. 2205 | Flat film Hi-D 2504 | Flat film Int. dens. 2405 | Flat film Conv. dens. 2205 |
|---|---|---|---|---|---|---|---|
| Extruder temperature | °F. | 325 | 300 | 300 | 500 | 475 | 450 |
| Gate temperature | °F. | 325 | 325 | 300 | 500 | 500 | 475 |
| Extruder stock temperature | °F. | 325 | 315 | 300 | 500 | 450 | 400 |
| Die temperature | °F. | 325 | 325 | 300 | 550 | 525 | 475 |
| Die-stock temperature | °F. | — | — | — | 530 | 515 | 450 |
| Screw speed | RPM | 62 | 60 | 58 | 50 | 65 | 78 |
| Output | Lbs./hr. | 65 | 65 | 65 | 95 | 95 | 90 |
| Optimum blow-up ratio[1] | — | 3/1 | 3/1 | 3/1 | — | — | — |
| Water-bath temperature | °F. | — | — | — | 140 | 140 | 140 |
| Take-off speed | Ft./min. | — | — | — | 140 | 125 | 115 |
| Minimum film thickness[2] | Mils | 0.50 | 0.50 | 0.50 | 0.60 | 0.60 | 0.60 |

* 2½" NRM extruder, 1½ mil film.
[1] Bubble diameter/die diameter.
[2] Take-off speeded to maximum consistently possible without web breaks.

for maximum clarity. This simple clarity test is an excellent gauge of see-through clearness, which from a practical standpoint is the best measure of clarity. The test is duplicable and not dependent upon the operator. Using a Standard American Optical #1930 eye chart, the operator finds the distance at which he can just see perfectly the bottom line (No. 11). He then places the film about 2 in. in front of his eyes and records the lowest line he can then read perfectly. The 2405 blown film as extruded in this series has a clarity of 11, or maximum, and Hi-D shows a reading of 10, while conventional 2205 is about seven. This demonstrates that for film usage the Hi-D has probably the highest practical density, stiffness and heat resistance while retaining desirable clarity.

This is true, since it is well known that low-pressure materials, having densities above 0.940, lose in clarity and gloss. Although not measured here, the Hi-D film is noticeably glossier than conventional polyethylene film.

Permeability and water-vapor-transmission data show the high-density film to be only 40 to 50% as permeable as conventional polyethylene for carbon dioxide, oxygen and water vapor. By comparison, the high-clarity 2405 is 70-75% as permeable as the normal-density 2205. This striking improvement in the high-density film will allow many more uses in certain areas, especially food packaging, than has been possible with other high-pressure polyethylenes. The lack of odor and freedom from toxicity amplify this important point.

The gas-permeability data were obtained on an Aminco apparatus which operates at differential dried gas pressure on each side of the film at a constant temperature. Measurement of gas volumes indicates rate of permeation. For these tests 2-mil film was tested at 14.7 p.s.i. and 30 deg. C. Water-vapor transmission was measured at 100 deg. F. with 100% relative humidity on one side and 0% on the other. Weight changes in these atmospheres indicate water-vapor transmission.

Similarly, greaseproofness was measured by the Mil-B-121 method but, using unsupported film instead of the specified laminate, the total time to grease penetration was read. It can be seen that Hi-

**Gas permeability data** are obtained in this Aminco apparatus which operates at differential dried gas pressure on each side of film sample at a constant temperature. Test shows Hi-D is only 50% as permeable as conventional polyethylene.

D, as well as 2405, is at least three times more greaseproof than conventional polyethylene. This particular advantage should allow larger application in food and industrial packaging, unsupported or laminated, where grease resistance is a problem.

Heat sealability of the high-density film is excellent and equivalent to conventional polyethylene. Non-breakable bonds of 1.25-mil film were made on a double bar sealer at 340 deg. for ¾ sec. at a jaw pressure of 18 p.s.i.g. By comparison, conventional material requires 315 deg. F. at the same cycle. Converters report that Hi-D film treats and prints as well as conventional polyethylene.

**Slip properties** are measured by testing for coefficient of friction. Film-covered sled is pulled over film-covered block by a Tinius-Olsen Electromatic testing machine. Tests show Hi-D has superior slip properties, comparable to medium lubricated conventional polyethylene film.

### Extrudability

As mentioned, all of the film properties discussed above were obtained on 1.25-mil film produced on commercial-size equipment at commercial rates. Standard production lots of each material were picked at random from available stocks and, because of strict quality-control practices, should be indicative of customer usage. As shown in Table III, Hi-D blown film should be extruded at temperatures about 25 deg. F. higher than normally used for more conventional polyethylene to obtain optimum properties. Flat Hi-D film requires 50-100 deg. F. higher stock temperatures. It will also be noted in Table III that Hi-D minimum film thickness (draw-down), as determined on the same production scale equipment, is equivalent to or better than that of the other materials studied. This property, of course, is highly dependent upon the dies and take-away equipment used and their set-up. We have had several reports from the field that thicknesses of 0.5 mil have been obtained on all of these materials including the high density.

### Applications

Poly-Eth Hi-D resin for film has been on the market in commercial quantities for only a few months. Consequently, although it is being extruded commercially, its applications in the packaging field have not been fully developed. The most interesting prospect, of course, is for boilable and sterilizable food packets. A study has been made of this possibility, using the film produced for the preceding evaluation, as shown in Table IV. It will be noted that frozen and unfrozen foodstuffs may be packaged in the high-density film and cooked in boiling water for any practical length of time and served. This immediately brings to mind several distinct advantages. For instance, the housewife need have no messy pans, contaminated with food particles, to clean. Also, foods may be cooked entirely in their natural juices undiluted by water, thus retaining all their natural flavor and vitamins. Lastly, it is now possible to serve a cooked food portion "untouched by human hands" from the food-processing plant to the gourmet.

Table IV also shows that these Hi-D film packages are steam sterilizable at temperatures up to 240 deg. F. This means that foods thus packaged can also be cooked in [*Continued on page 212*]

**Table IV: Boilability and sterilizability of Hi-D film packages**
(Film thickness 0.00125 in., heat seals at 340 deg. F., ¾ sec., 18 p.s.i.g. on jaws)

| *Packaged material* | *Frozen* | *Water temp. °F.* | *Steam* temp. °F.* | *P.s.i.g. & steam* | *Cooking time, min.* | *Food flavor* | *Appearance* |
|---|---|---|---|---|---|---|---|
| Corn | Yes | 210° | — | — | 10 | Excellent | Unaffected[1] |
| Peas | Yes | 210° | — | — | 10 | Excellent | Unaffected |
| Shrimp | Yes | 210° | — | — | 15 | Excellent | Unaffected |
| Carrots | No | 210° | — | — | 45 | Excellent | Unaffected |
| Potatoes | No | 210° | — | — | 45 | Excellent | Unaffected |
| Inert nonfoodstuff | | | 240 | 10 | 7 | — | Unaffected |
| Inert nonfoodstuff | | | 250 | 15 | 6 | — | Film melted |

* Autoclave.
1 Bags puffed slightly.

# Polyethylene extrusion coatings

*A study of factors in their formation which influence adhesion to substrate and may improve subsequent heat sealability*

*By H. A. Arbit,* E. E. Griesser* and W. A. Haine**

The properties of polyethylene resins which enhance their potential as coating materials are well known. They include water and water-vapor resistance, low-temperature flexibility, grease resistance, heat sealability, tear resistance, chemical inertness, thermal stability, large surface coverage per pound and low cost.

The application of polyethylene by the extrusion-coating process to paper, cellophane, foil and other substrates provides materials for a wide range of applications. The merits of the particular web are combined with the advantages of polyethylene to produce a set of complementary properties.

Polyethylene-coated paper alone is used to package everything from chemicals and fertilizers to fresh food products. Polyethylene-coated cellophane is excellent for liquid-containing products such as ketchup, pickles, sauerkraut, suntan oils and meat. Aluminum foil has been made much more versatile by coating with polyethylene; cubed beefsteak, instant coffee, dehydrated soup, liquid shampoos and military protective laminates use this combination. The limitations apparently depend only on the imagination and ingenuity of the individual converter.

Most polyethylene-coated materials today are produced by the so-called extrusion-coating technique (1).[1] In this process, molten polyethylene is extruded through a flat film die as shown in Figure 1. The film is then drawn down from the die into the nip of two rolls located directly below the die. The substrate is introduced over a rubber pressure roll and forced against the hot film at the nip. Simultaneously, the polyethylene facing is solidified and cooled by the other roll, which is a specially designed chrome-plated steel cooling drum (2). As the coating continues to contact this drum, it is further cooled prior to being wound.

Maintenance of high product quality depends on

*Development Engineers, Development Laboratories, Bakelite Co., Bound Brook, N.J. This paper was presented at the Paper-Plastics Conference of the Technical Assn. of the Pulp & Paper Industry at Appleton, Wis., and is reprinted here, in substance, by permission from TAPPI Magazine.

[1]Numbers in parentheses identify References appended.

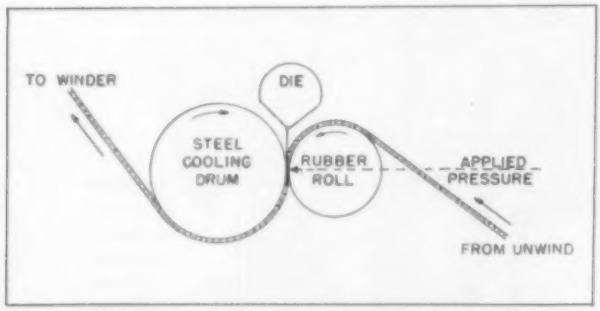



**Figure 1.** Extrusion-coating process for producing polyethylene-coated packaging materials. Molten polyethylene is extruded through a flat film die.

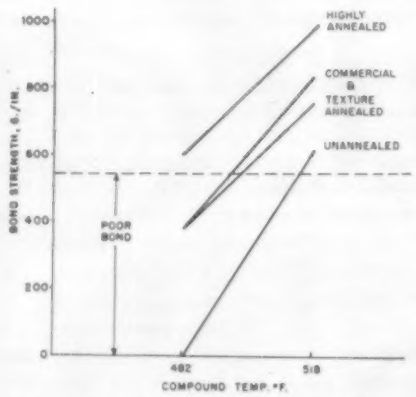



**Figure 2.** Effect of the degree of annealing on adhesion of polyethylene to foil.

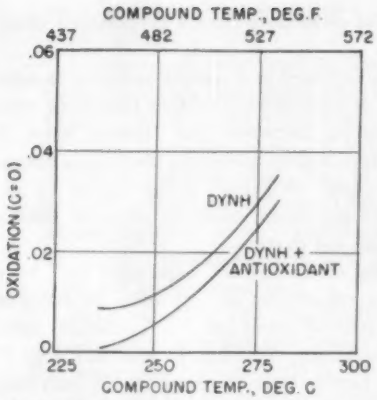



**Figure 3.** Effect of anti-oxidant modification on oxidation.

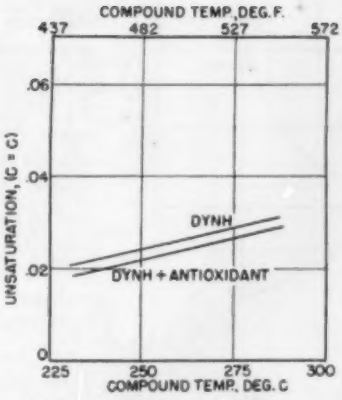



**Figure 4.** Effect of anti-oxidant modification on unsaturation.

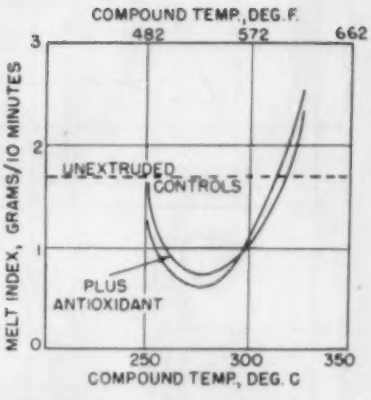



**Figure 5.** Effect of anti-oxidant modification of melt index.

careful manufacture. For instance, in the past, aluminum foil and cellophane have been two of the most troublesome substrates to coat, due to their relatively smooth, non-porous surface leading to poor adhesion.

Other difficulties that have been experienced with foil and cellophane include loss of heat sealability after aging, odor development and degraded physical properties. For some time now, various studies have been made in Bakelite laboratories on the aspects of applying polyethylene coatings to foil. The basic principles involved in coating foil generally apply as well to polyethylene coatings on paper, cloth, cellophane and other synthetic substrates.

This paper will review and consolidate the findings as a guide for improved polyethylene-coated products. The more pertinent considerations covered are: resin viscosity, processing and modification; extrusion temperature, pressure and thickness; substrate surface, pre-heating and post heating, and sealability and aging effects.

## Adhesion

*Types of bond.* In investigating adhesion of polyethylene extrusion coatings, we considered the types of bond encountered with various substrates. When coating rough or porous substrates, such as certain papers and cloths, bonding is achieved primarily through penetration into or between the substrate surface by the molten polyethylene. This mechanical-type bond usually cannot be broken without rupturing the substrate. On the other hand, when coating smooth, continuous surfaces such as aluminum foil and cellophane, penetration is not the prime factor and adhesion depends on the attraction between molecules, rather than on physical bonding.

Therefore, we must deal with two types of bond: *mechanical*, due to physical interlocking, and *chemical*, due to intermolecular forces of attraction. Both types of bond depend to some degree on wetting, penetration and specific adherence. A good mechanical bond to kraft paper requires intimate surface contact (wetting) and sufficient fibre penetration. Strong chemical bond to aluminum foil or cellophane, however, requires wettability; and, most important, a structure exerting strong electrochemical forces to the substrate. Polyethylene, as made, does not exert such forces (sometimes referred to as dipoles) because it is non-polar and inert. However, high-temperature extrusion coating will result in structural changes yielding the polarity needed for adhesion.

As can be seen, adhesion control is more critical for *chemical* bonding and, thus, this type of bond will be stressed. The factors affecting adhesion are shown in Table I.

*Substrate type and surface.* Experiments with many types of substrates have shown that porosity,

**Table I:** Factors affecting adhesion

A. *Mechanical bond*
   1. Substrate type and surface
   2. Coating viscosity
   3. Pressure
   4. Post heating—pre-heating
B. *Chemical bond*
   1. Substrate type and surface
   2. Coating temperature
   3. Draw distance
   4. Pre-heating
C. *Other considerations*
   1. Speed
   2. Thickness
   3. Quench temperature

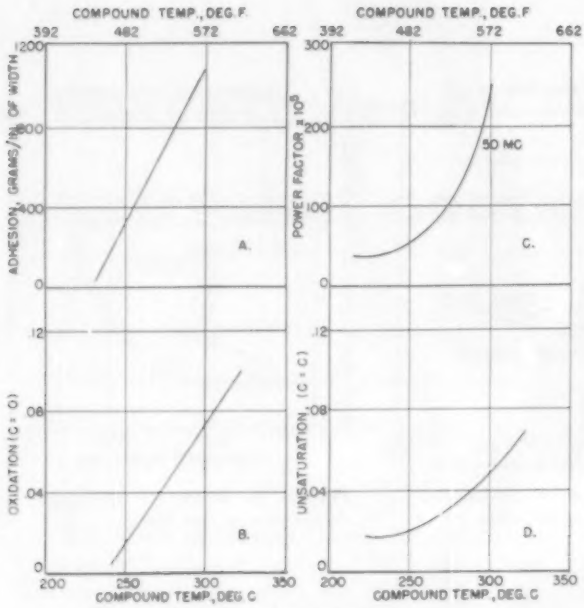



**Figure 6.** Effect of compound temperature on (A) adhesion, (B) oxidation, (C) power factor and (D) unsaturation.

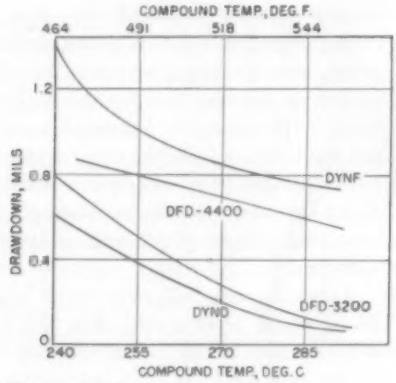



**Figure 7.** Draw-down vs. the compound temperature.

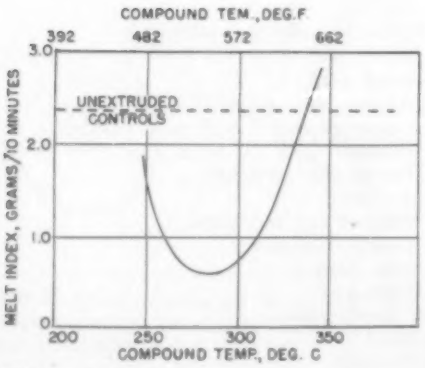



**Figure 8.** Effect of compound temperature on melt index of coating.

roughness and cleanliness have a pronounced effect on adhesion.

Aluminum foil used as a coating substrate is usually the soft or annealed type rather than hard tempered. Annealing improves foil dryness, since it removes surface rolling lubricants used in its manufacture. As shown in Figure 2, the degree of annealing had a significant effect on adhesion, which improved with foil dryness.

Four types of 1-mil-thick aluminum foil were evaluated as subcarriers by extrusion of Bakelite DFD-3200 natural resin at two different compound temperatures, 482 deg. F. and 527 deg. F. These temperatures were chosen to yield both borderline and good adhesion results, respectively, based on previous experience. The foils evaluated differed only in the amount of rolling lubricant present on the surface, depending on the degree of annealing.

The results indicate that, especially at the low temperatures, adhesion is adversely affected by the presence of lubricants on the foil surface. The best bond was obtained using the highly annealed foil and the worst with the hard "as-rolled" foil. The commercial dry annealed (slippery surface) foils yielded results which were intermediate between the other two.

The cellophane used in polyethylene extrusion coating is generally the so-called one-side-moisture-proofed grade. This type of cellophane has a wettable or untreated side and a nitrocellulose lacquer coating for moisture resistance on the other side.[2] Chemical bonding is best obtained on the wettable, uncoated side.

Primers for cellophane and foil which act as adhesion promoters are receiving wider interest. Such primers are not adhesives, but act merely to improve *chemical* bonding. Titanium ester solutions

[2]Typical grades available are American Viscose MSBO-1, Du Pont MSAT-80 and Olin MSAT-80.

**Table II:** Properties of films and coatings made from Bakelite polyethylene resin DYND

| *Description* | *Coating adhesion to foil, gm./in. (500° F. compound temperature)* Initial | *Aged 1 month* |
|---|---|---|
| DYND — resin | 630 | 550 |
| DYND — processed | 760 | 670 |
| DYND + anti-oxidant | 720 | 700 |
| DYND + lubricant | 770 | 600 |
| DYND + anti-oxidant + lubricant | 730 | 690 |

have been used for this purpose as well as shellac wash coatings.

In paper and board coating, the super-calendered or highly starch-filled stocks offer greater resistance to good adhesion than rough kraft paper, the surface of which is readily coated. In some cases, it is desirable to pre-heat paper, etc., to help bond. This prevents premature chilling of the coating and removes absorbed surface volatiles such as moisture. Pre-heating is less effective than post heating and both will be discussed later.

*Resin viscosity and modification.* The type of resin used and its thermal history prior to application are important considerations. Such factors as resin viscosity, degree of processing and modifier additions all influence the adhesion and quality of the polyethylene-coated stock.

It was found that resin molecular weight governs draw-down characteristics in extrusion coating, but has only a minor effect on adhesion. Viscosity difference among adjacent molecular-weight grades of resin did not affect adhesion.

However, evaluations of low molecular-weight resins have shown that adhesion can be obtained at somewhat lower temperatures. This is probably due to the increased fluidity of such polymers, which affords easier wetting and/or penetration of the substrate and, of course, improved draw-down. However, it was demonstrated that resins which are too fluid ("soupy") at the coating temperature exhibit poor gauge control. To compensate for gauge variations, temperatures can be lowered, but adhesion problems again arise. Thus, there appears to be a balance between optimum adhesion and satisfactory gauge control, indicating that there is a limiting molecular weight below which the balance cannot be maintained. With current high-pressure polymers, resins lower in molecular weight than Bakelite polyethylene resin DYND are unsuited for use as extrusion coatings.

Processing of resins improved draw-down and adhesion appreciably. Therefore, it is an effective means of conditioning polyethylene resins for extrusion-coating operations.

The effect of processing on the adhesion to 1-mil foil of DYND is shown in Table II. From these data it can be seen that adhesion was improved by 20% with processing. This improvement in adhesion is believed due to the improved surface smoothness imparted by processing, allowing closer interfacial contact.

Stabilization of polyethylene resins with minor amounts of anti-oxidants had little effect on draw-down, adhesion, heat sealing or other properties of coatings, whereas over-stabilization was harmful.

The addition of anti-oxidant and its effects on the thermal and oxidative stability of polyethylene are shown in Figures 3 and 4. DYNH stabilized with a food-grade anti-oxidant was compared with its unmodified analog by extrusion of 1½-mil coatings on foil. Comparative samples were obtained at dif-

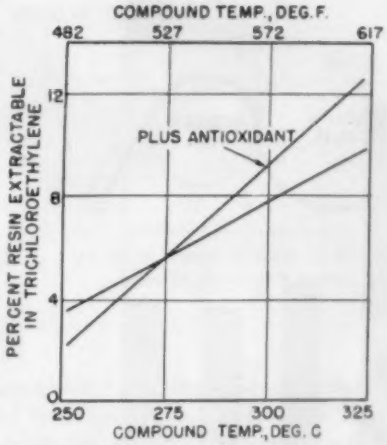



**Figure 9.** Effect of anti-oxidant modification on low-molecular-weight extractables.

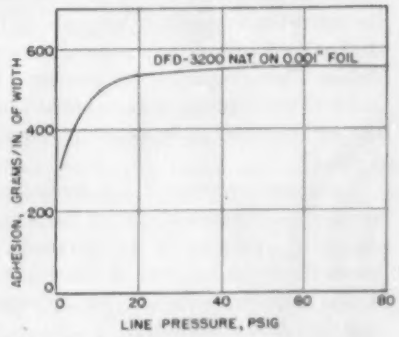



**Figure 10.** Adhesion vs. rubber roll pressure.

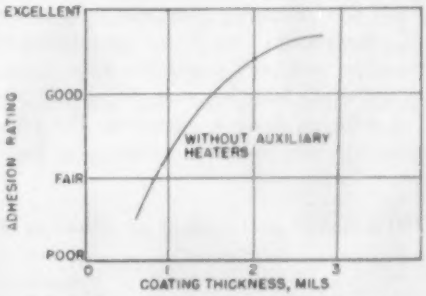



**Figure 11.** Adhesion vs. coating thickness.

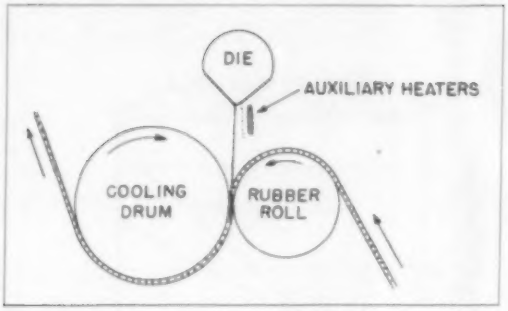



**Figure 12.** Use of auxiliary heaters in the extrusion-coating process to improve adhesion.

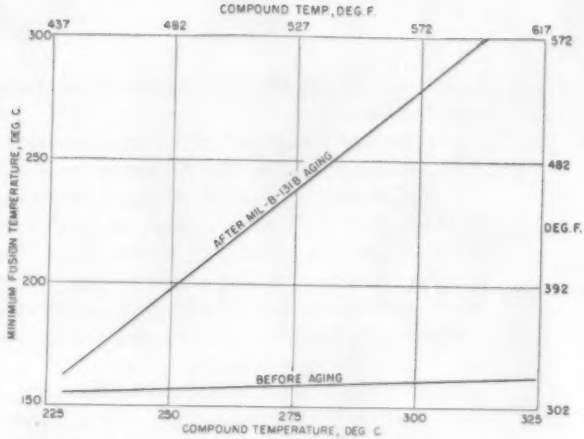



**Figure 13.** Extrusion temperature vs. sealability of unaged and aged foil coatings. Minimum fusion temperature is lowest temperature at which polyethylene can be sealed with 1-sec. dwell time, 15 psi pressure so seal cannot be separated by hand.

ferent temperature levels at controlled conditions. The amount of anti-oxidant used did not effect adhesion at high compound temperatures, but did detract somewhat from adhesion at low compound temperatures, as shown in Table III. Spectrophotometric analyses (Figures 3, 4) revealed an increasing trend of oxidation and polymer breakdown as the extrusion temperature was raised. The anti-oxidant as used only slightly reduced the degree of oxidation. Flow properties (as measured by the melt index of the coating) were essentially unaffected by the anti-oxidant, as is shown in Figure 5 and in Table IV.

*Extrusion temperature and applied pressure.* Extrusion compound temperature has a great effect on degree of oxidation of the extruded coating as it leaves the die. It has been shown that increased oxidation improves adhesion, but increases odor and degrades heat sealability.

The importance of compound temperature on adhesion to foil is again shown in Figure 6a. DYNH films 1.5 mils in thickness were coated onto 1-mil foil over a temperature range of 392 to 572 deg. F. It was found that increasing compound temperature improved adhesion and draw-down, but resulted in odor formation and poor sealability after aging. Adhesion increased from less than 10 up to 1,000 gm./in. of width, as shown in Figure 6a. The adhesion referred to was measured as stripping force with a Suter tester[3] (Figure 16). The improved adhesion resulting from increased compound temperatures was caused by oxidation and breakdown of the polymer. Such physiochemical changes were measured by infrared spectrographic analysis as plotted in Figure 6b and tabulated in Table V. Carbonyl content (C=O, a measure of oxidation) rose from nil to 0.092% over the 392 to 572 deg. F. compound temperature range studied. In Figure 6c, power factor, another method of measuring oxidation, increased similarly. Unsaturation (C=C) also rose, but to a much lesser extent than oxidation as shown in Figure 6d.

As would be expected, the higher compound temperatures also improved draw-down rates and thus gave thinner coatings. Typical data illustrating this effect for several grades of resin and compound are given in Figure 7.

Polymer breakdown, which was shown to result in improved adhesion, also was characterized by melt-index changes. Melt index is a relative meas-

[3]Alfred Suter Co., New York.

**Table III:** Effect of anti-oxidant on adhesion of foil coatings

| | *Bakelite polyethylene resin DYNH—processed* | | | *Bakelite polyethylene resin DYNH + anti-oxidant—processed* | | |
|---|---|---|---|---|---|---|
| Compound temp., deg. F. | *455* | *500* | *536* | *455* | *500* | *536* |
| Bond strength gm./in. | 21 | Good | Excellent | 15 | 162 | Excellent |
| Oxidation, % C=O | 0.008 | 0.016 | 0.037 | Nil | 0.011 | 0.031 |
| Internal unsaturation, % C=O | 0.021 | 0.026 | 0.029 | 0.019 | 0.023 | 0.028 |
| Terminal unsaturation, % C=C | 0.068 | 0.066 | 0.067 | 0.059 | 0.058 | 0.071 |
| Pendant methylene, % C=C | 0.083 | 0.080 | 0.076 | 0.078 | 0.072 | 0.075 |
| Power factor x $10^5$ | 49 | 68 | 91 | 57 | 61 | 94 |

ure of viscosity or flow expressed in grams per 10 min. at 374 deg. F. and 43.3 psi(ASTM D 1238-52T). Thus, high melt index indicates a soft material. A plot of melt index versus temperature, as in Figure 8, showed a minimum value in the 527 to 572 deg. F. range. Melt-index tests were performed on polyethylene films extruded at the indicated temperatures. This curve illustrates changes in chemical structure due to cross-linking and chain scission. Initially, cross-linking or stiffening is predominant, as shown by the dip in the curve, followed by softening due to depolymerization, as shown by the sharp rise in the curve.

Further evidence to confirm this was obtained by exhaustive extractions of the same type of films in trichloroethylene. (See Figure 9.) The results are compared with spectrographic data in Table IV, which shows significant changes due to oxidation and breakdown of the polyethylene.

Susceptibility of the coated foil to odor formation also increased with compound temperature, as demonstrated by numerous smell tests. This would be expected from the chemical changes that take place during coating, as previously shown in Figures 6b, 6c and 6d. In addition, it was shown that odor development is also catalyzed by the aluminum foil itself, thereby increasing odor more than would be expected by the effect of temperature alone. Table VI compares spectrographic analyses of two polyethylene compounds as foil coatings and as free films made at the same conditions during several extrusion runs at three compound temperatures. From these data it can be seen that, with increasing compound temperature, carbonyl oxygen and total unsaturation increase to a greater degree in polyethylene when it is coated on foil than when it is a free film. Since odor results from the formation of acid, alcohol and ketone by-products, these results are to be expected and indicate the function of polar groups in improving adhesion.

The study of extrusion-coating techniques which affect the adhesion of polyethylene to aluminum foil was extended to include the coating nip-roll pressure. Experimental results are plotted in Figure 10. Bond-strength measurements indicated that pressure is not as critical a factor as compound temperature. No significant differences in bond were obtained by varying the line pressure from 10 to 80 psig. However, without pressure on the rubber back-up roll, a decrease of approximately 44% in bond strength resulted. The same phenomenon was observed at various compound temperatures. These results confirm the fact that some back-up pressure is required, but the degree of pressure is not critical for non-resilient substrates such as foil. Pressures of 100 lb./linear in. of roll face are common in the trade.

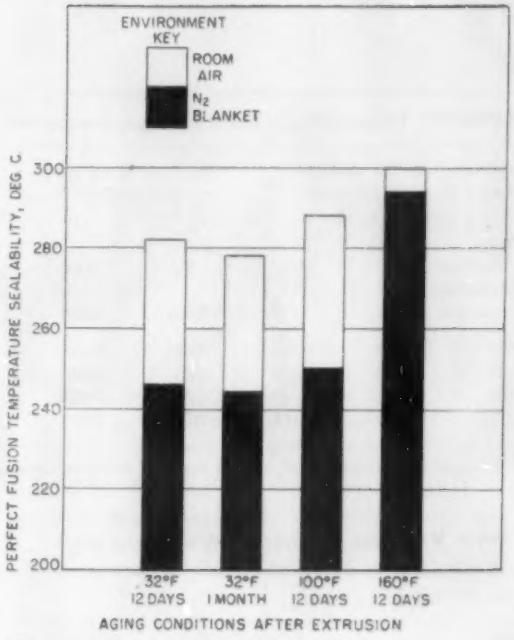



**Figure 14.** Effect of post-extrusion aging on minimum fusion temperature.

*Coating weight and cooling rate.* Coating factors other than those relating to resins and substrates are also important considerations in extrusion coating. Such factors as coating thickness and quench rate also affect the quality of polyethylene-coated substrates.

Adhesion of polyethylene extrusion coatings is adversely affected by high speed and low coating weights. The effect of coating thickness on adhesion is shown in Figure 11. Thickness was varied by changing the web speed and holding all other extrusion conditions constant. Adhesion of thin coatings (less than 1 mil) was found to be poor, apparently due to the heat loss in the draw-down zone at the high speeds required.

In applying thin coatings of 1 mil and less, de-

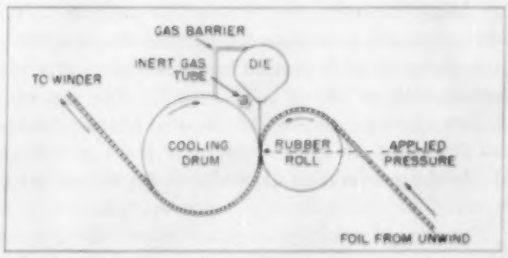



**Figure 15.** Use of an inert gas blanket in the extrusion-coating process for improved sealability of coating.

**Table IV:** Degradation effects of high compound temperature on DYNH with anti-oxidant

| *Extrusion temp., °F.* | *% oxidation (Carbonyl)* | | *% internal unsaturation* | | *% terminal unsaturation* | | *% resin* extractables* | | *Melt index gm./10 in.* | |
|---|---|---|---|---|---|---|---|---|---|---|
| Anti-oxidant | *No* | *Yes* | *No* | *Yes* | *No* | *Yes* | *No* | *Yes* | *No* | *Yes* |
| Unextruded controls | 0 | 0 | 0.021 | 0.018 | 0.006 | 0.006 | — | — | 1.72 | 1.72 |
| 482 | 0.058 | 0.001 | 0.028 | 0.016 | 0.005 | 0.006 | 3.8 | 1.8 | 1.36 | 1.61 |
| 527 | 0.128 | 0.054 | 0.031 | 0.030 | 0.005 | 0.006 | 5.9 | 7.7 | 0.57 | 0.62 |
| 572 | 0.224 | 0.140 | 0.076 | 0.056 | 0.010 | 0.008 | 9.0 | 10.5 | 1.41 | 1.06 |
| 617 | 0.101 | 0.096 | 0.051 | 0.059 | 0.018 | 0.018 | 7.3 | 8.1 | 2.52 | 2.48 |

*Per cent resin extractable from extruded films with boiling trichloroethylene. Reference: Works Laboratory Manual, 23-207-1.

**Table V:** Effect of compound temperature on adhesion and physiochemical structure of DYNH foil coatings

| *Compound temperature, °F.* | *406* | *442* | *480* | *568* |
|---|---|---|---|---|
| Adhesion, gm./in. of width | 0 | 10 | 520 | 620 |
| Oxidation, % carbonyl, (C=O) | Nil | 0.003 | 0.010 | 0.092 |
| Transinternal unsaturation, % C=C | 0.013 | 0.015 | 0.016 | 0.041 |
| Terminal unsaturation, % C=C | 0.045 | 0.057 | 0.048 | 0.069 |
| Pendant methylene, % C=C | 0.066 | 0.069 | 0.069 | 0.067 |
| Crystallinity, % | 55 | 57 | 56 | 55 |
| Power factor x $10^6$ at 50 MC | 39 | 39 | 51 | 243 |

creasing adhesion may be offset by increased temperatures, slower extruder and web speeds, and slower quenching rates (hot chill roll). These factors should reduce the amount of heat loss and thus alleviate problems with thin coatings.

There is a tendency for extrusion coaters to reduce the draw-down distance for thin coatings at high speeds, in order to prevent heat loss in the coating before it reaches the substrate. In view of the important role of oxidation on adhesion, it seems desirable to increase rather than decrease the draw distance and to prevent heat loss with auxiliary heaters such as shown in Figure 12. The use of radiant heaters between the die and the nip also has the effect of giving improved bond strength due to the acceleration of oxidation on the surface layer.

The rate of cooling or quenching of the polyethylene coating is a function of extruder output, web speed, coating temperatures and surface temperature of the cooling drum. The cooling-drum surface can be operated from about 140 deg. F. down to the limits of a given refrigeration system. At higher temperatures the polyethylene sticks to, or tends to follow this roll, resulting in web breaks or delamination. Low quench-roll temperatures result in rapid cooling of the coating which tends to yield spotty or poor adhesion. It has been our experience that the use of a warm cooling drum is desirable to promote adhesion. This is especially true of low coating weights, which do not require the same degree of cooling as heavy coatings.

Positive control of the roll temperature in conjunction with web speed (or thickness) would appear to be desirable to obtain maximum quench temperatures and improved adhesion. Such a means of temperature control would allow for the use of higher roll temperatures to quench thinner coatings and lower roll temperatures for heavier coatings, both consistent with good roll release.

*Pre-heating and post heating.* In the extrusion coating of metallic foils, the relatively non-porous, inert surface encountered accentuates the problem of adhesion. Pre-heating of aluminum foil prior to polyethylene coating was investigated and found to improve the adhesion by approximately 30%, as shown below. Pre-heating was accomplished by contact with a steamheated drum at 374 deg. F. Even greater improvement in adhesion could conceivably be realized by higher pre-heat temperature obtained from an infrared heater or gas flame.

| *Foil pre-heating* | *Adhesion gm./in. of width* |
|---|---|
| No | 576 |
| Yes | 757 |

The improved adhesion obtained with foil preheating may be attributed to the following three factors:

(a) Foil pre-heating prevents premature chilling of the applied coating by decreasing the temperature differential between the molten polyethylene (at 500

to 550 deg. F.) and the room temperature (or sometimes colder) foil.

(b) Foil pre-heating volatilizes residual rolling lubricants and absorbed surface moisture, thus increasing foil wettability by the polyethylene.

(c) Foil pre-heating contributes to greater air oxidation at the interface of the polyethylene and the foil and, thus, improves the forces of attraction between these two dissimilar materials.

Pre-heating of foil to improve adhesion is preferable to excessive compound temperatures in the extruder, since thermal abuse often yields other undesirable effects such as bad odor, severe blocking and poor heat seal after aging. Since foil is a better heat conductor than paper and cellophane, adhesion can be improved easily by foil pre-heating, thereby avoiding excessive degradation of the polyethylene.

Post heating of polyethylene paper coatings has been used to improve adhesion by allowing deeper penetration into the paper fibres (5). However, with the relatively non-porous surface of aluminum foil, only an improvement in interfacial surface attraction would be expected. This appears to be the case, since post heating of coated foil has been found to improve markedly adhesion and oil resistance. Thus, post heating of coated foil also affords the use of lower coating temperatures to minimize resin degradation.

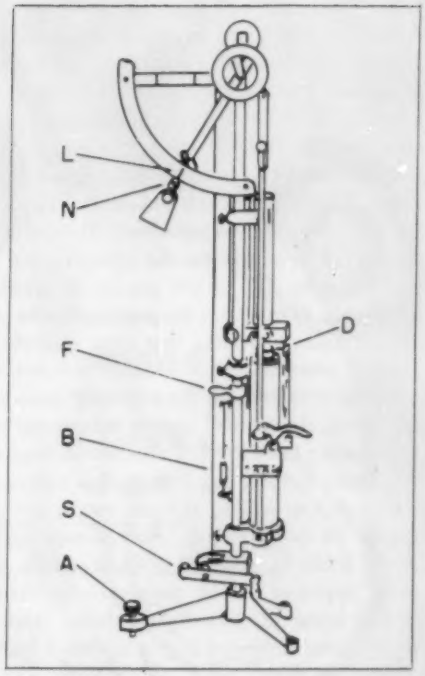



**Figure 16.** Suter tester for adhesion measurement. Carriage is raised to upper position by hand lever S and held automatically by hook lever F. After tester is plumbed by adjusting screw A on tripod and plumb bob B, pendulum is set to zero and held by catch N. With specimen in upper and lower clamps, catch N is released and hook lever F is released, enabling carriage to move downward. When specimen strips, the pendulum will stop and pointer L will then register bond strength. Knurled nut D regulates the speed of carriage drop.

### Sealability

*Extrusion temperature.* Over-oxidation of polyethylene during extrusion coating impairs heat sealability of the coated product. This is especially true of foil and cellophane coatings, due to the high temperature necessary for good adhesion. Samples of commercial foil coatings were examined by infrared spectrographic analysis. These samples were illustrative of difficulties experienced in passing Government specifications for seam strength after aging. In most cases the results showed that the polyethylene coating had been excessively oxidized and adhesion was generally very good.

For good adhesion, oxidation of the coating is necessary. For good heat-sealing response, this oxidation should be minimized for the following reason: If the coated foil is heat sealed shortly after extrusion, a good seal is afforded. However, when the same material has been aged for several months at room temperature or by intensive short-term aging (intended to simulate long-term storage: Military Specification MIL-B-131B), the coated foil will no longer give a good fused seal under commercial conditions. Oxidation is believed to begin with the formation of peroxides which are unstable and, after aging, break down to carbonyl groups (C=O) (6). These carbonyl groups impart polarity, which has been shown to improve adhesion and also raise the temperature required for a well-fused seal. The latter is illustrated in Figure 13, where minimum fusion temperature is plotted against compound temperature before and after accelerated aging. Aging raised the minimum fusion temperature above 572 deg. F., an increase of more than 180 deg. from the off-the-machine samples. Since most manufacturers' recommended sealing temperatures are below 572 deg. F., these aged samples would not be sealable on commercial equipment.

*Resin modifications.* Such factors as resin viscosity, processing and the incorporation of modifiers such as anti-oxidants, butyl rubber, etc., were ineffective in maintaining good heat sealability after aging.

An experiment was performed to determine if

anti-oxidant concentration has a significant effect on heat-seal aging characteristics and adhesion of the coating. Modified resins containing varying amounts of anti-oxidant were extruded onto foil as 3.5-mil coatings and were subjected to heat-seal tests before and after MIL-B-131B aging. None of the coatings was heat sealable after the accelerated aging test, although all were sealable before. One coating (containing excessive anti-oxidant) showed complete lack of adhesion, whereas the others ranged in bond strength from 317 to 444 gm./in. of width. Thus, when used in excessive amounts, adhesion was prevented, again indicating that some oxidation of the resin is essential, but sealability was not affected.

*Aging environment.* As would be expected from the above, the thermal history subsequent to extrusion coating has a marked effect on sealing response. Aluminum foil coatings were aged at different conditions prior to sealing and the results are given in Figure 14 (white bars). Cold storage maintained initial levels of sealability, whereas high temperatures appeared to be progressively detrimental. Warehousing of polyethylene-coated stock at low temperature is deemed highly desirable before commercial usage.

*Methods of improvement.* Work at these laboratories has shown that the sealing problem is essentially due to surface oxidation and may be circumvented or alleviated by either of the following methods:

1. Use the lowest possible coating temperatures to reduce surface oxidation.
2. Make heat seals before aging whenever possible.
3. Buff sealing areas with fine polishing cloth or similar materials to remove surface oxidation prior to heat sealing after aging.
4. Best of all, use a heated nitrogen "blanket" on only the free side of the coating during extrusion, as described in Figure 15, to prevent excessive oxidation of the free polyethylene surface and obtain good adhesion on the substrate side.

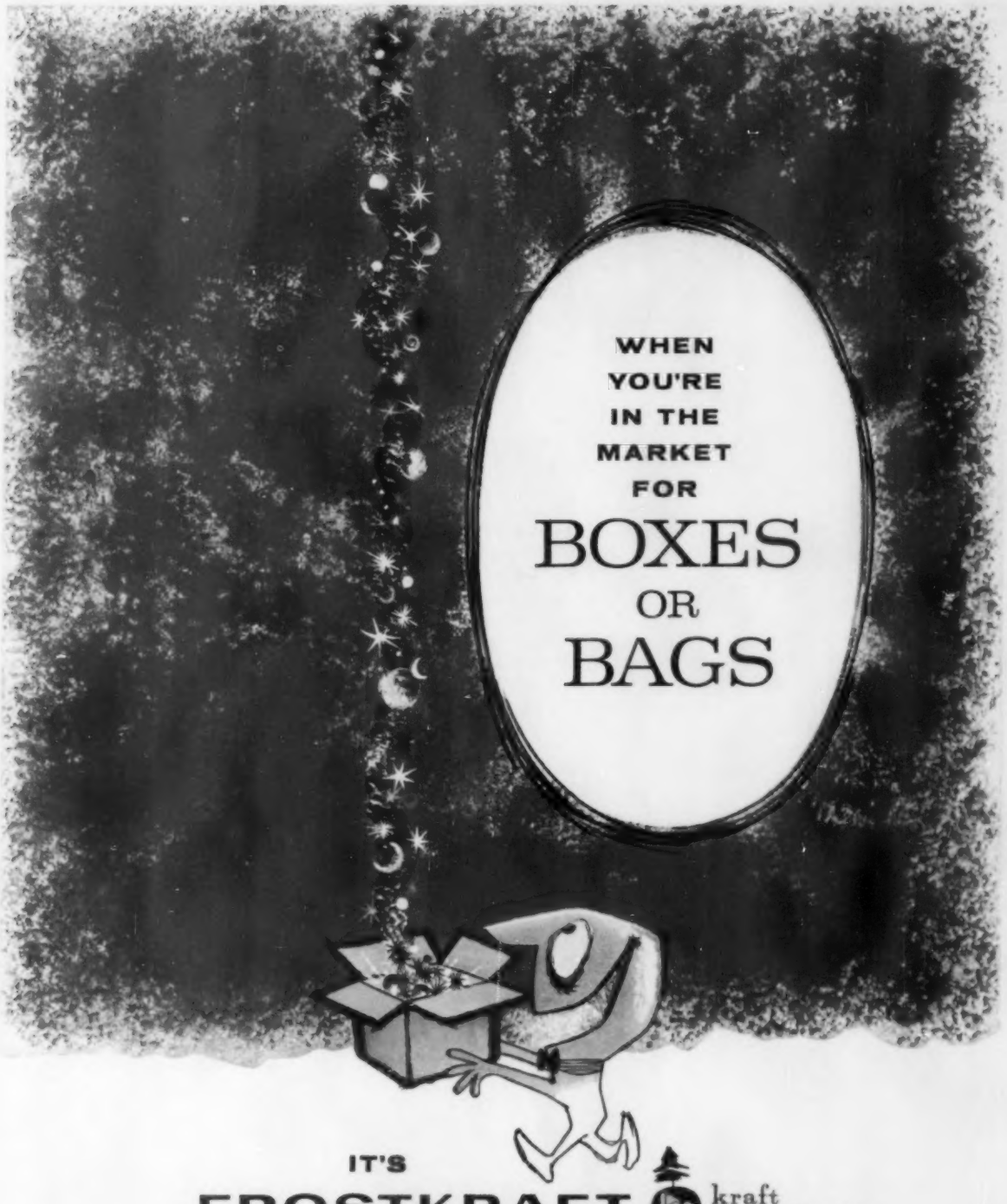
It was found that sealing difficulties were eliminated by coating polyethylene in an inert atmosphere, as shown in Figure 15. As the film is extruded from the die, a blanket of nitrogen is placed on the free side of the film. This was done with a perforated tube, equivalent in length to the width of the web, which was placed close to the die-nip roll area. Air was still free to enter the side of the film which subsequently was to adhere to the foil, so that good adhesion was afforded. Commercial foil coatings prepared in such an oxygen-free environment showed greatly improved heat-sealability characteristics after accelerated aging (MIL-B-131B), whereas conventional coatings failed to pass seam-strength specifications (Figure 14). The improved sealability after aging obtained with the use of an inert environment was attributed to the reduction of oxidation on the sealing side of the coating.[4]

Other advantages that accrue from this exclusion of air are better odor stability and decreased sticking of polyethylene to the metal chill roll. This roll may then be run hotter (desirable for better adhesion), since no layer of oxidized polyethylene will adhere and tend to pull the web away from the foil. Optimum conditions are obtained by heating the nitrogen and/or air to lessen the cooling effect on the film, so that satis- [*Continued on page 204*]

[4]Patent applied for by Union Carbide & Carbon Corp.

**Table VI:** Infrared spectrographic analyses of polyethylene films and coatings

| *Compound temperature* | *439 °F.* | | *486 °F.* | | *540 °F.* | |
|---|---|---|---|---|---|---|
| | *Coated foil* | *Film* | *Coated foil* | *Film* | *Coated foil* | *Film* |
| Oxidation, % C=C | | | | | | |
| Bakelite polyethylene compounds | | | | | | |
| DFD-4400 natural | Nil | Nil | 0.017 | 0.001 | 0.084 | 0.024 |
| DFD-4200 natural | Nil | Nil | Nil | Nil | 0.056 | — |
| Internal unsaturation, % C=C | | | | | | |
| DFD-4400 natural | 0.016 | 0.018 | 0.016 | 0.018 | 0.043 | 0.025 |
| DFD-4200 natural | 0.014 | 0.018 | 0.018 | 0.017 | 0.036 | — |
| Terminal unsaturation, % C=C | | | | | | |
| DFD-4400 natural | 0.045 | 0.050 | 0.049 | 0.050 | 0.112 | 0.044 |
| DFD-4200 natural | 0.049 | 0.050 | 0.047 | 0.043 | 0.092 | — |
| Pendant methylene, % C=C | | | | | | |
| DFD-4400 natural | 0.064 | 0.066 | 0.062 | 0.065 | 0.069 | 0.062 |
| DFD-4200 natural | 0.065 | 0.067 | 0.065 | 0.064 | 0.068 | — |
| Crystallinity, % | | | | | | |
| DFD-4400 natural | 60 | 60 | 56 | 62 | 56 | 56 |
| DFD-4200 natural | 58 | 58 | 58 | 58 | 55 | — |




IT'S

# FROSTKRAFT kraft packaging

Gift-wrapped stars? A box full of moons? Well, maybe not. But FROSTKRAFT boxes and bags can handle just about everything else. Let us help solve your packaging problems.

*Corrugated Containers • Multiwall Shipping Sacks • Standard & Specialty Bags*

FOREST PRODUCTS DIVISION **OLIN MATHIESON CHEMICAL CORPORATION** WEST MONROE, LA.

FROSTKRAFT IS A TRADE MARK

# Q Questions & A Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

### Polyethylene as an overwrap

**Q:** *Is it possible to use polyethylene film as an overwrap for a folding carton? On several of our products we could see considerable advantage in durability and protection if there were an overwrapping grade of polyethylene film. Our present cellophane wrapping machines would not appear to be capable of handling such a film, but can you tell us the problems in this area and what the prospects are for obtaining a polyethylene film suitable for use as a carton overwrap?*

**A:** Cellophane can be considered an ideal material as an overwrap for folding cartons for a number of reasons. Cellophane is heat sealable over a wide temperature range and through multiple folds; the seals can be made by sliding heating pads, and the wrapper can be easily torn or peeled from the package. Cellophane is also an effective moisture barrier. Cellophane does have the disadvantage of being affected by changes in the humidity of the air, which can cause excessive shrinkage in very dry atmospheres.

There have been many attempts to use transparent plastic films as carton overwraps, but there are several serious problems which have prevented their successful adaptation. Polyethylene and other plastic films are thermoplastic, which means that they can be softened and distorted adjacent to heat-sealed areas. This thermoplastic property and the rather narrow sealing range make it almost impossible to seal through multiple folds at the end of a carton wrapper. Also, it would be difficult to control and apply heat precisely in order to effect a peelable seal. If the overwrap were completely sealed, it would be very difficult for the user to remove the wrapper except by cutting.

There is a great deal of research work now going on, aimed at modifications and improvements in the basic design of wrapping machines to handle plastic films. At the same time, film producers are working on coatings for polyethylene which should broaden the material's sealing range and make it possible to effect peelable seals. This latter development will be helped by the fact that some of the newer polyethylene resins have a higher heat-distortion point.

The answer to your question is that, at present, there is not a polyethylene film suitable for use as a carton overwrap, nor is there a suitable wrapping machine for applying polyethylene film as a carton overwrap. However, there is no doubt that within the next few years the problems will be overcome and such a wrapper and suitable equipment for applying it to cartons will be commercially available.

### Dehydration of frozen foods

**Q:** *One of our products is a semi-cooked food which we plan to handle as a frozen product. We have tested various kinds of packages and are quite surprised at the severe drying out that occurs in some packages within only a few weeks of storage in a typical freezer. Since the product is held at 0 deg. F., we were of the opinion that the drying out would not be a problem. Is our product unusual in this respect, or is such moisture loss a typical occurrence in frozen storage?*

**A:** Any type of frozen food can be severely dehydrated if it is stored in a typical freezer without being in a moistureproof package. The fact that your product is a complex, partially cooked food product does not make it unusual in this respect. At 0 deg. F. the water is entirely in the form of ice crystals and water in this form still has an appreciable vapor pressure. This means that the water vapor from the ice crystals can migrate to colder portions of the freezer, where it appears as frost. This dehydration or freezer burn can occur rapidly because the moisture loss is from the surface, while the moisture in the interior of the product is in a solid state and cannot migrate to make up the surface losses.

It is suggested that you examine some of the many different types of frozen-food packages on the market. You will notice that they are always fully sealed packages having one or more layers of cellophane, waxed paper, aluminum foil, polyethylene or some similar moisture barrier.

You should also be sure that the wrapper or box is as tight fitting as possible around the product to eliminate voids, which can cause local dehydration of the product you are packaging.

### Perforating produce bags

**Q:** *We supply printed cellophane rolls to a customer who packages fruits and vegetables. Our customer has asked us if we can perforate the cellophane to supply added ventilation to the package. In this instance the cellophane is used as an overwrap for a tray. Can you suggest a simple method by which we can perforate this roll stock?*

**A:** It is entirely possible to construct a rotary perforator which could be used in connection with the slitting, or even the printing operation, to perforate the cellophane web. However, a high-speed rotary perforator capable of putting a sufficient number of holes in each web would be a complex and expensive unit to manufacture and operate.

It is more practical for the perforating to be done on your customer's wrapping machine, because at this point the web is moving much more slowly and a simple die punch can be used. The best answer is for your customer to get in touch with the manufacturer of his wrapping machine and have a perforator attached on the machine.

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**whatever the job . . .**

SELF-STICKING

# PERMACEL® TAPE

*In our complete line, there's a self-sticking tape for every job . . . write Permacel Tape Corporation, New Brunswick, N. J.*

a Johnson & Johnson company

tions of the freezer, where it appears

tached on the machine.

# Equipment and materials

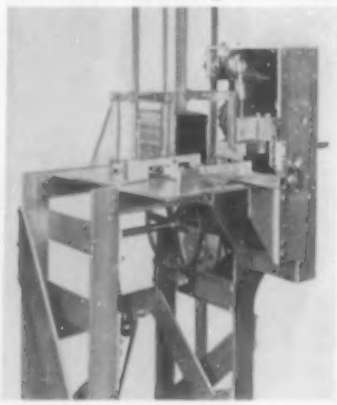
### Two-station automatic weigher

Glengarry Processes, Inc., Bay Shore, N.Y., has introduced a new two-station, high-speed automatic weighing unit in the low-price bracket. It is capable of weighing a wide variety of dry products, from clay to small hardware items, over an adjustable range from 1 oz. to 5 lbs. at rates up to 40 per minute. The double weighing head handles materials twice as fast as single-station weighers, or can be used to weigh two different materials simultaneously. Compact design makes this weigher a useful accessory to high-speed bag-making machines for net-weight filling operations, the company reports. An automatic feed mechanism is available to convert the unit into a fully automatic filling machine.

### New bag for hygroscopic materials

A new paper bag lined with polyethylene-coated foil has been announced by Arkell & Smiths, Canajoharie, N.Y., for packaging very hygroscopic powdered products such as instant coffee and powdered milk. Resistant to water vapor, the polyethylene-coated foil liner also permits heat sealing of the bag seams and bottom.

### New carton-marking attachment



The Industrial Marking Equipment Co., Inc., 454 Baltic St., Brooklyn 17, has developed a new carton printing unit for attachment to Ceco packaging machines and similar types of equipment, for marking, dating and coding. The carton marker takes its speed from the packaging machine so that printing can dry before carton ends are glued. Printing head takes standard foundry type.

### New heat-shrinkable film

A new transparent film that can be heat sealed and heat shrunk to make a skin-tight, moistureproof, gas-tight package for meats such as bacon, picnics, butts, loins and pork rolls has been introduced by Acme Backing Corp., Canal & Ludlow Sts., Stamford, Conn. Acmetite 40 can be used with hot-water or hot-air shrink equipment, with minor equipment modifications for packaging bacon. The film yields 50,000 sq. in. per pound and offers meat packers opportunities to improve their packages and reduce costs for many meats, according to the company.

### New reflective metallic coating process

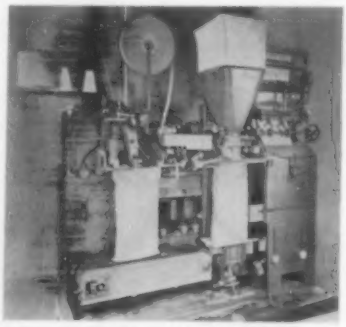
A new vacuum process for the production of highly reflective metallic coatings on rolls of plastic film, textile fabrics and ultimately paper has been announced by National Research Corp., Cambridge, Mass. The NRC process reportedly has made possible the production of a virtually flawless metallized surface on DuPont Mylar polyester film, it is stated.

### New case-forming machine

A new machine that selects a case from the magazine, opens and forms it, then folds in the bottom flaps has been announced by Schroeder Machines Corp., P.O. Box 1123, Syracuse 1, N.Y. Sealed-bottom cases can be turned out with an auxiliary attachment that applies adhesive to the flaps before folding. Custom built to case size, the machine is 9 ft. long. Pneumatic drive keeps maintenance costs low, the manufacturer reports.

### Automatic packer for multiwall bags

Open-mouth multiwall bags are automatically positioned, filled, closed and sewed (with or without bound-over tape) by a new packing machine introduced by St. Regis Paper Co., 150 E. 42 St., New York 17. The VredOMatic packer is designed primarily for granular, free-flowing materials such as sugar, ammonium nitrate, feeds and polyethylene pellets. Auxiliary equipment adapts it for semi-free-flowing materials. One man supplies empty bags, tape and sewing-machine thread, and may be able to tend two or more adjacent machines, the company believes. Bags of 25- to 125-lb. capacity are processed at a rate of six to 12 per minute.



### Faster flexographic printing ink

Flexographic printing at speeds from 250 to 500 fpm on packaging film, foil and paper is reported with a new ink developed by Bensing Bros. & Deeney, 3301 Hunting Park Ave., Philadelphia 29, Pa. The new ink combines high gloss, freedom from blocking and water resistance with the facility for high-speed printing on polyethylene, all types of cellophane (including plain uncoated, saran coated, semi-moistureproof and moistureproof), Mylar and other polyester films, aluminum foil, glassine and paper, according to the company. Based on a new kind of resin vehicle and

In our complete line, there's a self-sticking tape for every job . . . write Permacel Tape Corporation, New Brunswick, N. J.

a Johnson & Johnson company

# This is a Package

# . . . but this is an Ad!

Opener key on every can!
Finest ... because it's all meat!
4 CANS FOR
HORMEL VIENNA SAUSAGE
Big Buy 4 PACK
Finest ...because it's all meat!
HORMEL VIENNA SAUSAGE
PACKED IN WATER

## *CLUSTER-PAK*® cartons have space for advertising to "billboard" your product . . . act as their own display

Chances are, you spend from thousands to millions urging customers to reach for your products at point of purchase. *But what do they see when they get there?* A confusing blend of competing packages? Or a sign that says, "This is what you're looking for?" The answer's clear with Cluster-Pak! Its bigger area shouts your name and message. As sure as "it pays to advertise," it pays to *put your products in Cluster-Pak!*

**STRONGEST CARTON MADE**

No other carton offers Cluster-Pak's double protection. You get the unequaled strength of famous Mead quality kraft combined with the world's only self-locking construction that needs no glue. *So your products are safer in Cluster-Pak!*

**For full details on low cost market tests, write P. O. Box 4417, Atlanta 2, Georgia**

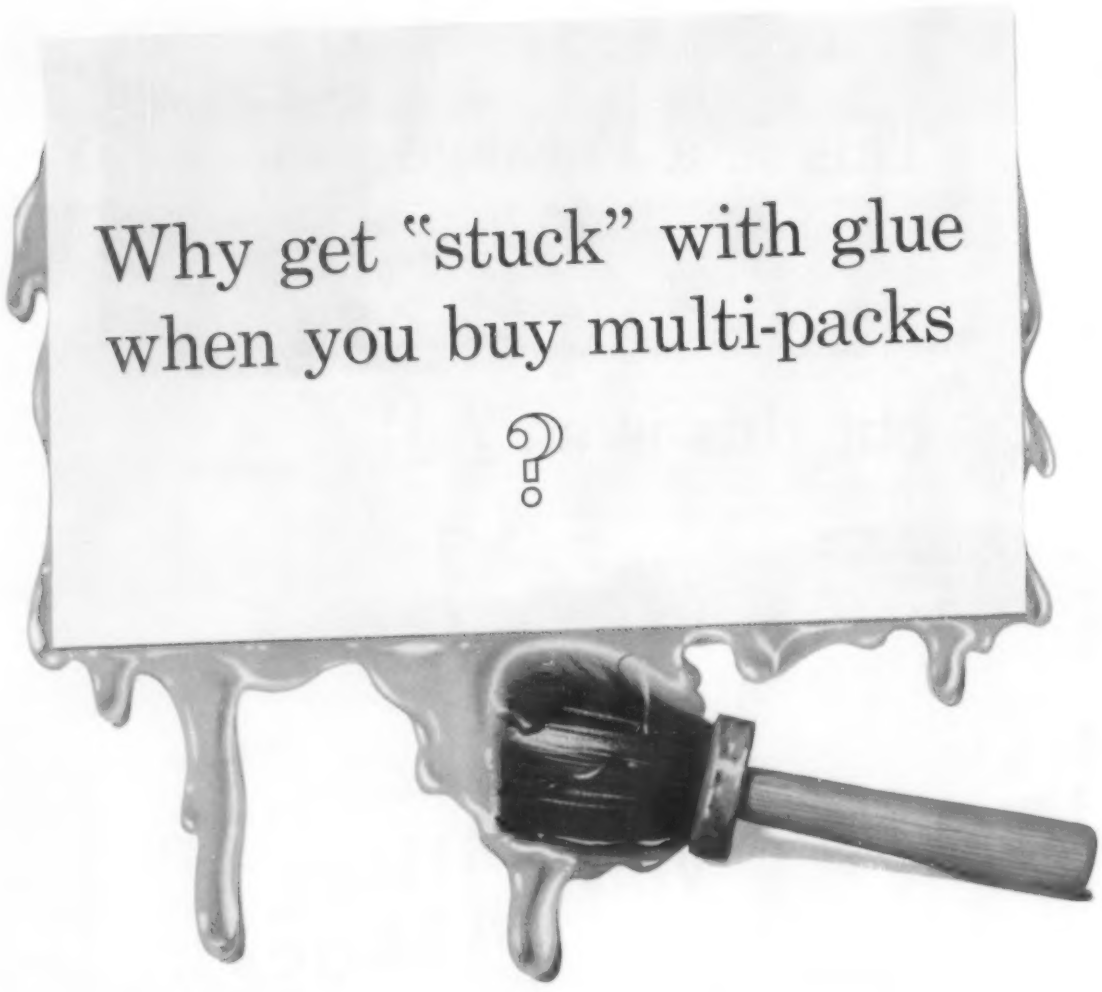
CLUSTER-PAK IS ANOTHER CREATIVE IDEA FROM

## *Atlanta Paper Company*

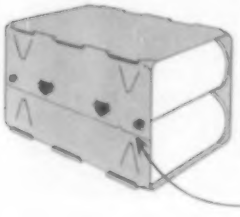
*Where Packaging is Advertising*

Backing Corp., Canal & Ludlow Sts., Stamford, Conn. Acmetite 40 can be used with hot-water or hot-air

company. Based on a new kind of resin vehicle and


# Save with *CLUSTER-PAK*®. . . the self-locking carton that needs no glue to be world's strongest!



*Of course* you can glue Cluster-Pak cartons if you *want* to. In fact, when we invented Cluster-Pak, we provided for glue pots on our machines. Yet! Over 700 million cans have been packaged in Cluster-Pak since then. And *not a single customer has ever used a single drop of glue!* The reason? Cluster-Pak offers the unequaled strength of famous Mead quality kraft combined with the world's only self-locking construction that *requires no glue.* So why pay for glue you neither want nor need? Instead, put your money in *quality* . . . and protect your products in Cluster-Pak. It's the strongest multi-pack carton ever made!

CLUSTER-PAK IS ANOTHER CREATIVE IDEA FROM

*Atlanta Paper Company*

*Where Packaging is Advertising*

ATLANTA PAPER COMPANY, ATLANTA 2, GA.

*This insert is printed by letterpress on* MEAD PRINTFLEX ENAMEL, Substance 80

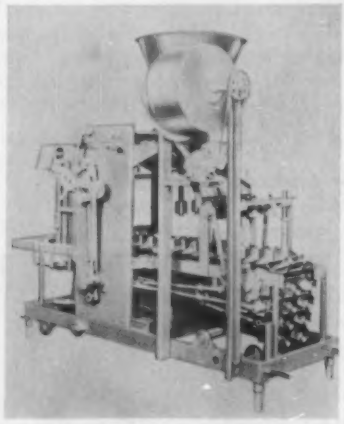
# Equipment and materials

[*Continued from page 154*]

mild hydrocarbon solvent, Mul-T-Brite ink can be used on any type of flexographic press equipped with Buna "N" synthetic rubber plates and rollers, according to the supplier.

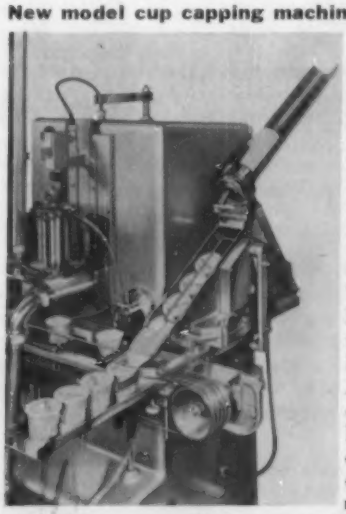
### Filler for fibre cartridges

Hope Machine Co., 9400 State Rd., Philadelphia, Pa., has introduced a new high-speed, heavy-duty filling machine to pack fibre cartridges automatically with grease, roofing cement, caulking, buffing compound and similar viscous materials. A single operator feeds cartridges into the dispensing stacks, keeps the unscrambler barrel filled with lids and checks the machine's performance. Cartridges are automatically filled from the bottom up to insure a uniform fill without air pockets. At the press station, a lid is pushed into each cartridge to the depth required. Cartridges are then automatically ejected from holding pockets at the discharge end onto a conveyor belt carrying them to the packing department. Available in two-, four-, five- and six-line sizes, the machines loads 8½-in. cartridges of 2-in. diameter at rates from 20 to 100 per minute. It is supplied with or without the unscrambler barrel and with either manifold chest or hopper.



### New model cup capping machine

A new model vacuum capper for sealing ice-cream and cottage-cheese cups has been introduced by Anderson Bros. Mfg. Co., 1907 Kishwaukee St., Rockford, Ill. The Model 433-1 Push-Thru vacuum capper can be added to an Anderson Model 433 Bulk-O-Matic capper to cap up to 45 cups per minute automatically with either paper or plastic snap-on cover-all lids. Consisting of a pick-off arm, a vacuum pump and motor assembly and a cap-chute assembly, the new capper can also be used alone as an integral unit.



### New protective material for heat sealing

A new heat-resistant cloth recommended for heat sealing such plastic films as polyethylene, saran and Pliofilm has been introduced by the Chicago Gasket Co., 1271 W. North Ave., Chicago 22. The new material, named Korda-Flex, has a fibreglass base with a smooth, heavy coating of Teflon on both sides. This construction reportedly eliminates the tendency of any plastic film to stick to the hot sealing surface. Korda-Flex is available in tapes, sheets and rolls up to 38 in. wide, in thickness of 0.003, 0.005, 0.010 and 0.015 in. The 0.003 and 0.005 thicknesses are said to be best for heat sealing.

### New ink for gravure and flexography

A new ink for gravure and flexographic printing on polyethylene, saran-coated cellophane, Mylar, P-T cellophane, regular moistureproof grades of cellophane, acetate, glassine, foil and paper has been announced by the Crescent Ink & Color Co., 464 N. Fifth St., Philadelphia 23. According to the company, the new ink, Rotoflex, has been flexographically printed up to 450 ft. per min. on treated polyethylene and, on gravure presses up to 300 ft. per min., with no drying problems.

### Light beams to monitor packaging line

Packaging operations can be monitored by miniature electric-eye controls in a new dual-light-beam system developed by Ess Instrument Co., Bergenfield, N.J. One light beam times the inspection; the other monitors it. Beams may be direct light cut-off or reflected, or a combination of both. For example, when a bottle on the packaging line cuts the timing beam, the reflecting beam checks for presence of a bottle cap. Both beams must concur in order to pass assembly. Standard Ess light units and photo units can be combined in assemblies small enough to get into difficult places in printing and packaging machines, according to the company.

### Colorant for linear polyethylene

A colorant for linear polyethylene to offset the difficulties of using ordinary dry colorants has been announced by Westchester Plastics, Inc., 326 Waverly Ave., Mamaroneck, N.Y. Formacolor LP for injection molding and Unicolor LP for extrusion have been tested on masterbatches with excellent results despite

ATLANTA PAPER COMPANY, ATLANTA 2, GA.

This insert is printed by letterpress on MEAD PRINTFLEX ENAMEL, Substance 80

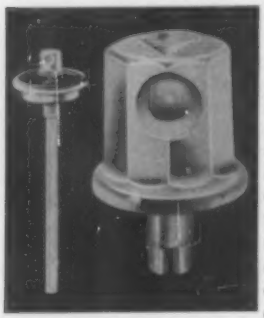
# Equipment and materials

[Continued from page 157]

the higher molding temperatures required by the new linear polyethylene, according to the company.

### New aerosol valve takes varied tips

A new multi-purpose aerosol valve permitting packagers of different types of aerosol products to carry smaller valve inventories has been developed by Aerosol Research Co., 743 Circle Ave., Forest Park, Ill. The AR-74 valve mounts a removable spray tip which provides both primary and secondary metering. Tips with various meterings for true and residual aerosols as well as foam products can be fitted to the standard valve base. A "Mist-Mizer" tip handles ultra-low-pressure and water-base spray formulations. Designed for cold or pressure filling, the valve is constructed of nylon with a stainless steel spring. It is available for glass bottles as well as the standard 1-in.-diameter mounting cup.



### Vinyl disks protect cream products

Busse Plastics, 64 E. Eighth Street, New York 3, has introduced a new vinyl disk to prevent evaporation in ointment and cosmetics jars. The disk rests on the rim of the jar to act as a moisture barrier and to prevent the transfer of the product to the screw cap.

### Flush-cut cellophane bags

A new tail clipping attachment enables the high-speed cellophane bag machine manufactured by Potdevin Machine Co., 200 North St., Teterboro, N.J., to produce flush-cut bags, as well as bags with a full or shallow lip. The machine produces either single or duplex bags using paste for the bag bottom. Cut-off and cross pasters are easily adjusted to keep down waste on long runs, according to the company.

### Captive snap caps for collapsible tubes

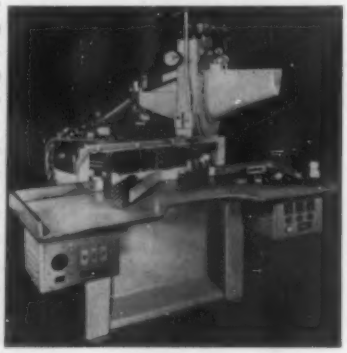
Captive snap-cap closures for collapsible tubes have been offered to packagers of products such as tooth paste and shaving cream by J. Mart Co., 9015 Wilshire Blvd., Beverly Hills, Calif. The closure is molded of polyethylene with a flexible hinge connecting the snap-cap cover and dispensing-nozzle base. The base is threaded inside for attachment to the tube head and the knurled outside surface is designed for easy gripping by the assembly machine. Variety in shape as well as color is easily achieved, according to the company.

### Nitrogen generator for packagers

Small generators which enable food manufacturers to cut processing and packaging costs by producing nitrogen at the point of use have been introduced by Baker & Co., Inc., East Newark, N.J., one of the Engelhard Industries. Foods packaged or processed under nitrogen today include vegetable shortening, edible oils, shortening products, margarine, coffee, dried milk, dry activated yeast, nut meats, orange and other citrus juices and powders, mayonnaise, dried beef, sandwich meats, bacon and sausages. The Nitroneal generators produce the gas at a fraction of the cost of nitrogen purchased in cylinders, according to the company. They require no maintenance and can be operated by a single unskilled worker attending the apparatus only ½ hr. per day.

### Improved filler for headed products

Exact-count packaging of nails, screws and other headed products is reportedly speeded up nearly 30% by a new hopper feeder for the Model 628 filling machine made by Batchelder Engineering Co., Inc., 125 Main St., Springfield, Vt. Maximum screw shank length is increased to 3¾ in.; maximum diameter is ⅓ in. The filling machine has also been improved to take cardboard boxes up to 6 in. long and hinged-cover boxes with vertical cover flaps up to 8 in. high. In exact counts from 1 to 1,000, headed products can now be loaded at rates up to 10 gross per minute, according to the company.



### Poly-coated cellophane in England

British packagers now have available, through British Cellophane, Ltd., 12-13 Conduit St., London W. 1, polyethylene-coated cellophane. Four different films, with polyethylene coatings 0.001- and 0.002-in. thick, are available in total thicknesses ranging from 0.00205 to 0.0034 in.

### Complete line of polyethylene bottles

Light-weight, natural-color polyethylene bottles in seven basic shapes are stocked in a new line introduced by Precision Extruders Div., Lamex Chemical Corp., Manchester, N.H. Shapes include Boston round, oblong, oval, prism cylinder, tapered round, straight cylinder and rigid high-temperature wide mouth.

### Half-gallon container strengthened

Mutual Plastic Mold, 3141 Firestone Pl., South Gate, Calif., recently introduced a new model Crystal Pack half-gallon plastic container with an inner ring for

sisting of a pick-off arm, a vacuum pump and motor

tested on masterbatches with excellent results despite

PRODUCT NEWS FROM Pfizer

# Now, Two Cost-Saving F. & D. A.-accepted Plasticizers

*for cellulosics...*

**Compare PFIZER CITROFLEX* A-2**

*(Acetyl Triethyl Citrate)*

The Food and Drug Administration has now accepted CITROFLEX A-2 for use in plastic food wraps—like the cellulose acetate food packages you see here. Non-toxic and odorless, CITROFLEX A-2 is accepted *for both fatty and non-fatty foods.* Most important to you, the cost of this citric acid ester is remarkably low, compared to other nontoxic cellulose acetate plasticizers.

*for polyvinyls...*

**Compare PFIZER CITROFLEX* A-4**

*(Acetyl Tributyl Citrate)*

CITROFLEX A-4 is also nontoxic, odorless and accepted by the F.&D.A. for use in plastic packaging of *either fatty or non-fatty foods.* You can use CITROFLEX A-4 to plasticize vinyl films for meat wrapping...vinyl coatings for food containers...vinyl plastisols for bottle crown liners, food jar sealing rings and "safe teething" vinyl toys. Compare the cost of efficient CITROFLEX A-4 with other *F.&D.A. accepted* vinyl plasticizers.

Besides A-2 and A-4, the Pfizer CITROFLEX line includes CITROFLEX 2 (Triethyl Citrate), CITROFLEX 4 (Tributyl Citrate) and CITROFLEX A-8 (Acetyl Tri-2-Ethylhexyl Citrate). Check into the Pfizer CITROFLEX plasticizers today. Mail the coupon below.

*CITROFLEX is a trademark of Chas. Pfizer & Co., Inc.

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Name_____

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Company_____

Address_____

City_____ Zone_____ State_____

M

Branch Offices: Chicago, Ill.; San Francisco, Calif.; Vernon, Calif.; Atlanta, Ga.; Dallas, Tex.

machine. Variety in shape as well as color is easily achieved, according to the company.

Calif., recently introduced a new model Crystal Pack half-gallon plastic container with an inner ring for



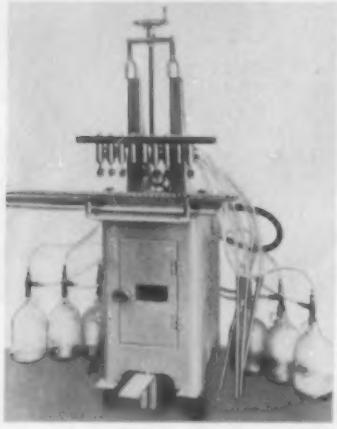
# Equipment and materials

[*Continued from page 158*]

all four, instead of two, of the under sides of the lid. This gives added support to the body of the container when filled with ice cream or when employed as a reuse item and provides a better seal against leakage, spilling and squashing, the company reports.

### Multicolor vial-filling unit

A machine that will fill nine small vials with assorted oil colors required for an amateur art kit has been announced by MRM Co., Inc., 191 Berry St., Brooklyn 11. Designed as a semi-automatic filling machine, it has nine spouts, each of which is individually linked to a different color reservoir to feed nine vial containers simultaneously. Alignment of nozzles over the empty vials when they are lined up on the conveyor is automatic. After capping, the operator can pick up a complete set of colors and insert them into the package.



### New frozen-food wrap

A new, plasticized, frozen-food wrapper with built-in sealing strength and designed to give frozen-food packages a positive lock at below-freezing temperatures has been announced by Nashua Corp., Nashua, N.H. Called "Zerac," the new packaging material reportedly will withstand excessive package punishment where repeated handling is necessary.

### New wine bottles

Two new four-fifths wine bottles are manufactured by Hazel-Atlas Glass Div., Continental Can Co., 100 E. 42 St., New York. The one shown at left is ribbed and of clear glass. Ribs at the bottom of the neck make the bottle much stronger at that point and let the light through to the product for extra sparkle, according to the company. Ribs at the bottom reportedly prevent bottles from bumping as they go through the filling machine. At the right is a semi-decanter-style wine bottle with decorative clusters of grapes circling the base.

### Bag closing machine

A portable, electric bag closer, designated as Class 2100, has been designed for limited or intermittent operations by the Union Special Machine Co., 400 N. Franklin St., Chicago 10. The Class 2100 closes bags made of cotton, burlap, jute, multiwall paper and laminated paper. It can produce stitch types 401 or 101 and it is equipped with safety protected mechanical thread-cutting device. The unit can be furnished for either portable hand operation (illustrated), suspension by top-lock spring balancer, or with a pedestal bracket. It weighs 10½ pounds.

### Adhesive for laminating films

A versatile adhesive which will bond Pliofilm, saran and polystyrene to foil; Pliofilm to saran, and Mylar to Pliofilm or saran has been announced by National Adhesive Div., National Starch Products, Inc., 270 Madison Ave., New York. Known as Resyn 76-3963, the adhesive is a clear, amber-colored synthetic rubber cement. It is also useful for a number of other laminating operations including leather to metal, the company reports.

### In-line bottle positioner

A new in-line bottle spotter unit has been announced by Gisholt Machine Co., 1245 E. Washington Ave., Madison 10, Wis. It is designed to eliminate hand labor in spotting or positioning bottles as they leave the machine and move to the work table for tax-stamp application, etc.

### Paper for separating frozen meat patties

The Mid-West Wax Paper Co., Fort Madison, Iowa, has announced a new-type patty paper that reportedly will not adhere to frozen meat. According to the company, the new separating paper is strip laminated and coated so that it will readily come off the frozen meat in one piece.

### New styrene molding material

A medium-impact styrene molding material for applications where clarity and toughness are equally important has been developed by the Monsanto Chemical Co., Plastics Div., 812 Monsanto Ave., Springfield 2, Mass. Called Lustrex LHA Natural, the new compound is stronger than general-purpose styrenes and also offers greater clarity than high-impact styrenes. It is sufficiently clear to show off most packaged products to good sales advantage, according to the company, which recommends it for retail marketing.

NATIONAL'S NEW

# NYLON AEROSOL CONTAINER

National pioneers again—this time with a new aerosol package of shatterproof nylon. It's the last word in safety and durability—won't crack or shatter when dropped. It's impermeable to propellants—withstands attacks from chemicals. Gracefully styled, with no visible seams, it has the eye-appeal that makes instant over-the-counter sales. Perfect for colognes, lotions, hair lacquers, anti-perspirants. Uses standard valve assemblies and can be filled with standard equipment.

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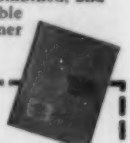

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Please send full details on the Styl-O-Matic Unscrambling Tables as described in Bulletin MP-4.

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decorative clusters of grapes circling the base.

pany, which recommends it for retail marketing.

# Plants and people

**R. Carl Chandler**, chairman of the board of **Standard Packaging Corp.**, New York, has announced the acquisition of all outstanding stock of four leading packaging manufacturers: **Fuller Label & Box Co.**, Pittsburgh; **Allegheny Label, Inc.**, Chewick, Pa.; **The Gebhart Folding Box Co., Inc.**, Dayton, Ohio, and the **Bradley & Gilbert Co., Inc.**, Louisville, Ky. Each will continue under its present management and each will operate as a division of the parent company.

Chandler

**Ivers-Lee Co.**, Newark, N. J., has named **J. R. O'Meara** executive vice president and a board member. **James Measday** is now general sales manager. **Lloyd I. Volckening**, president and board chairman, has reported the initiation of a long-range expansion program.

A creative design center to aid customer packaging needs has been established by **Fibreboard Paper Products Corp.** of San Francisco. The center will be located in the San Francisco area and will be directed by **F. A. Nordstrom**. The four departments comprising the center are market analysis, graphic design, structural design and packaging equipment.

Nordstrom King

**Clyde W. King** has been appointed manager of special marketing projects.

**Crossett Paper Mills**, Crossett, Ark., has named **J. W. Taylor** as the firm's "Salesman of the Year."

**Arthur M. Worden** has been named Boston sales manager, industrial trades tape division, **Minnesota Mining & Mfg. Co.**, Minneapolis, Minn., to succeed **A. S. Drew. Gibert G. Nevius** has been appointed division pricing supervisor.

Technical service and research laboratories and the main offices of the **Polymer Chemicals Div., W. R. Grace & Co.**, have been opened at 225 Allwood Rd., Clifton, N. J. The company's main plant for production of high-density linear polyethylene at Baton Rouge, La., is scheduled for completion later this year. Regional sales offices will be established in Chicago, Los Angeles and other key centers. Polymer Chemical's operations at Clifton will be devoted to solving customer problems. Experimental equipment at Clifton includes injection molding, extrusion and vacuum-forming units. Operations will include the development of new plastics as well as testing and applications activities involving resin, films, sheet, coatings and molded low-pressure polyethylene.

**Owens-Illinois Glass Co.**, Toledo, Ohio, announces new assignments in **National Container Corp.**, O-I's new subsidiary, and in the firm's new Mill and Multiwall Bag divisions. **Lester R. Edwards** is general manager of National Container and **George J. Schneider** is general manager of its West Coast box plants. **C. G. McLaren**, vice president of the Mill Div., is general manager of the subsidiary's mills and woodlands operations and will work from Toledo. **John D. Northup**, vice president of O-I's Mill Div., will supervise sales and production planning for the division. **Max Ackerman** has been appointed comptroller and **Donald B. Malcolm** director of personnel for the subsidiary and the two divisions. **Joseph Gruneisel** will assist Mr. Edwards in New York. General production manager for corrugated box operations is **F. W. Wallis. A. F. Carroll** has been appointed general manager of the Multiwall Bag Div.

A sales office at 301 S. Main St., Elkhart, Ind., has been established to serve the northern Indiana territory. **William A. Harmony** is senior salesman.

**The Celanese Corp. of America**, New York, has appointed three new sales representatives for its Plastics Div. **Kirk E. Smith** will cover the northwestern states and northern California with headquarters in San Francisco. **Edward M. Fox** will now cover New England, working from the company office in Leominster, Mass. **John W. Bloom** has been assigned to the Midwest and will operate from the Cleveland, Ohio, office.

**Frederick G. Lodes**, president of **Lodes Aerosol Consultants**, New York, has received the Achievement Award for Science from the Fordham College Alumni Assn.

**Ralph C. Krueger** has been appointed manager of converter sales for the Film Dept. of **E. I. du Pont de Nemours & Co., Inc.**, Wilmington, Del. Mr. Krueger, formerly manager of industrial sales, succeeds the late **Edward C. Lake.**

Krueger

The title of "Freon" Products Div. is now being used to identify the division of DuPont's Organic Chemicals Dept. concerned with the manufacture and sale of refrigerants, aerosol propellents, solvents and fire-extinguishing agents.

**Robert Groner, Jr.**, has been appointed general manager of the western district for the Fibre Drum & Corrugated Box Div. of **Continental Can Co., Inc.**, New York. Mr. Groner will headquarter in Cleveland.

Groner

**John C. Michaud** has been elected vice president of Continental's newly formed Containerboard & Kraft Paper Div.

The Robert Gair Div. of Continental has acquired a 40-acre plant site in Tyler, Tex., for a corrugated shipping container plant.

Promoted to be General Manager of all Breskin Publications, including MODERN PACKAGING Magazine, is **M. A. Olsen**, for 21 years a member of the publications' business staff.

**Hinde & Dauch Paper Co.**, Sandusky, Ohio, plans to construct a new corrugated box plant in St. Louis. The projected facility will have twice the capacity of the present St. Louis plant.

**John A. Adams** has been appointed manager of materials for the Silicone Products Dept., **General Electric Co.**, Waterford, N. Y.

**William H. Richards** has been named division general manager of paperboard mills at Los Angeles, Santa Clara and Tacoma, Wash., for **Container Corp. of America**, Chicago. **Jack W. Williams** has taken up similar duties for folding carton plants in Los Angeles, Santa Clara and Seattle. **Grant A. Morgenstern** has been appointed general manager and **Richard S. Thornally** sales manager at the Cleveland, Ohio, corrugated container plant. **John Morelli** has been named plant manager of the Chattanooga folding carton plant.

Richards Williams

**Dr. Leslie G. Joyner**, formerly director of research with Godchaux Sugars, Inc., has been appointed manager of fundamental research for **Sutherland Paper Co.**, Kalamazoo, Mich.

**Better Packages, Inc.**, Shelton, Conn., announce that the automatic conveyor tapers which they merchandise for the **Wagner Iron Works**, Milwaukee, will be known as Better Pac Case Sealers.

The directors of **The Mead Corp.**, Dayton, Ohio, have approved the acquisition of the total assets of the **Industrial Container & Paper Corp.**, Chicago, by **The Jackson Box Co.**, Cincinnati, a wholly

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*instead of singles...*

Unit of sale steps up when
you pack related items together...
in a single H & D corrugated box
that fairly asks to be carried home.
Better see H & D.

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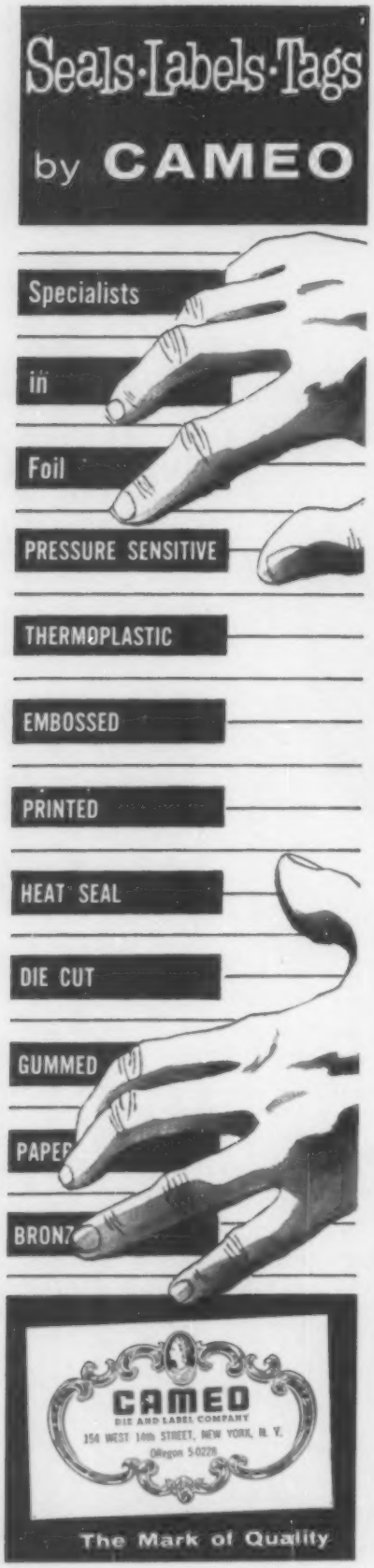
mental equipment at Clifton includes vents and fire-extinguishing agents.

Jackson Box Co., Cincinnati, a wholly




# Plants and people

owned Mead subsidiary. Industrial Container's corrugated box plant in Chicago will be operated as the Chicago Div. of Jackson Box. **Richard Norian**, president of Industrial Container, will continue as general manager and will be a vice president of Jackson Box.

**Daniel T. McFadden** has been named general sales manager of the beverage container division of the general sales department of **American Can Co.**, New York. He succeeds **George F. Henschel**, who has resigned. **William K. Schmalzriedt** has become manager of the firm's international division. **Wagner Van Vlack, Jr.**, now assists the president.

McFadden Schmalzriedt

**F. J. Dowling** succeeds **F. B. Newcomb** as sales manager of the central division. He is replaced as assistant manager of the division sales by **S. J. Austin**. Mr. Austin's former position as Chicago district sales manager has been taken by **E. Hoffman, Jr. I. S. Fellner** is the new manager of purchasing for Alaska and the West Coast. **Walter B. Bruce** is now assistant manager for sales promotion and marketing.

The company recently produced the first made-in-Florida beer can at its Tampa plant. The new operation will boost the plant's annual production. Installation of new facilities has begun at Canco's St. Louis plant for processing coiled steelplate for can making. The project is part of a program to eliminate the use of pre-cut sheets.

**Interchemical Corp.**, New York, has appointed three new managers in its Printing Ink Div. **John T. Hargrave** succeeds **William N. Davies, Sr.**, as

Hargrave Johnson Law

eastern district manager. **C. Stanley Johnson** will now manage the enlarged southern district. **William S. Law** becomes the new central district manager. The firm is opening a new multi-million-dollar ink plant in Cincinnati.

The merger of **Harris-Seybold Co.**, Cleveland, and **Intertype Corp.**, New York, has been approved by both companies. The organization will be known as **Harris-Intertype Corp.**

**Donald Pober**, treasurer of **Harkin Affiliates, Inc.**, New York, has sold his interest in the company to **Ira Harmon**, president, now the sole owner.

**Seaman Paper Co.**, 1236 Sherman, Evanston, Ill., has appointed **James E. Calvin** to the office of assistant to the president. Among his duties will be that of sales manager of the board and specialties division.

**Flex Products Corp.**, 231 Meadow Rd., Rutherford, N. J., is now making a full line of flexible plastic vials and tubes with snap caps or threaded closures.

**Greene Metal Export Packaging Corp.** of Chicago is now operating as an export packager for the Port of Chicago.

Henschel

**George F. Henschel** has joined **National Can Corp.**, Chicago, as vice president and general manager of sales. Mr. Henschel came to National from American Can Co. **M. C. Gordon** has been appointed district sales manager in San Francisco.

In Green Bay, Wis., National Can was welcomed by the city's Assn. of Commerce as the district's newest industry.

**James D. Griggs** has been named southern district sales service manager for kraft paper and bags for the Forest Products Div., **Olin Mathieson Chemical Corp.**, New York. He will headquarter in Atlanta, Ga. **Malcolm H. Smith** is now the division's assistant sales manager stationed at West Monroe, La.

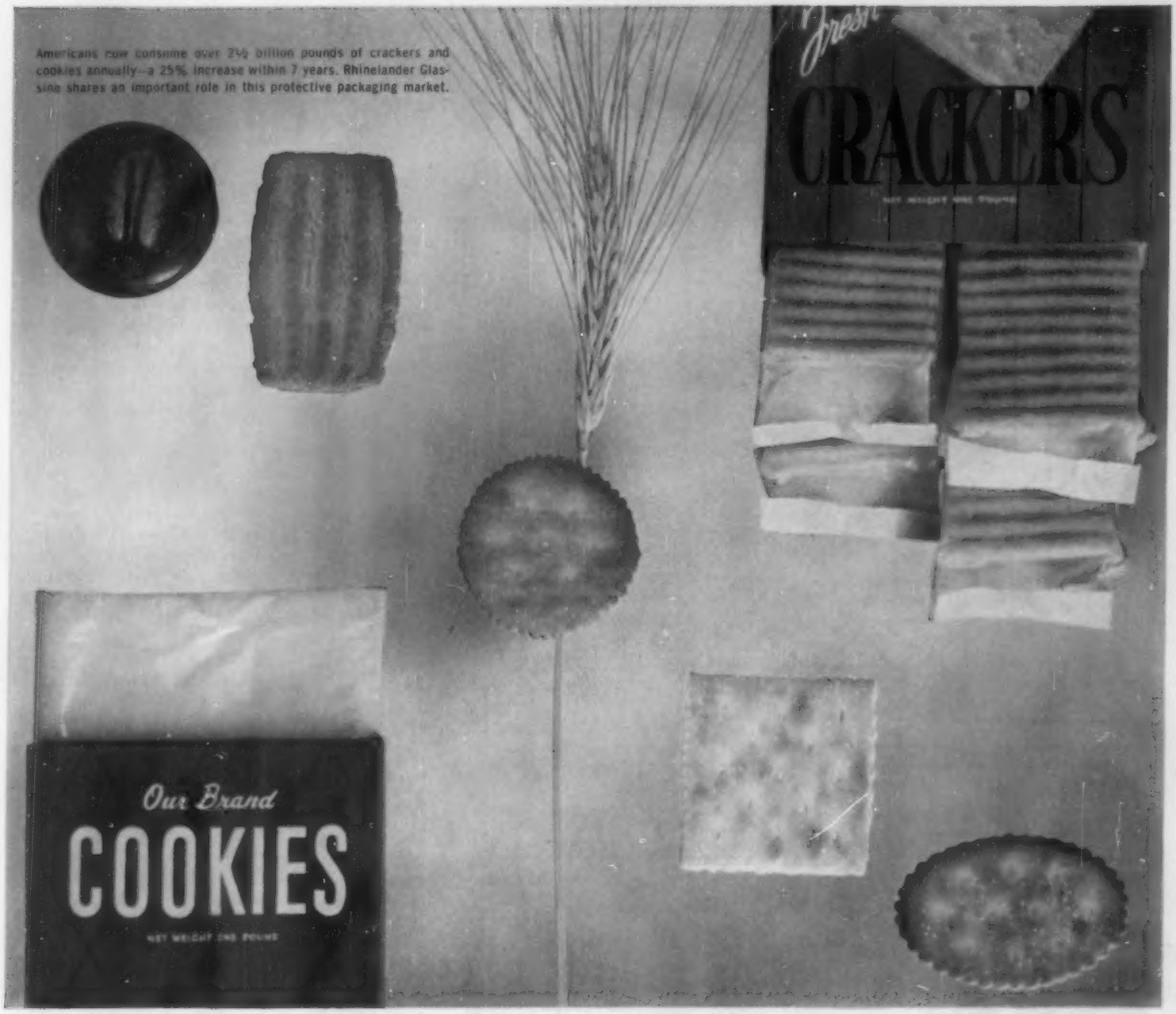
**James E. Bodie** and **Edward T. Behringer** are now representing the Film Div. in the Midwest and West, respectively. Mr. Bodie is located in Chicago, Mr. Behringer in Los Angeles.

New facilities have been installed by **Package Research Laboratory**, Rockaway, N. J., which will allow packages of considerable weight and size to be tested for impact, vibration and compression strength.

**J. Edwin Hanson** has been elected comptroller of the **Package Machinery Co.**, East Longmeadow, Mass.

**The National Metal Edge Box Co.**, Philadelphia, has under construction in Barrington, N. J., a new 114,000 sq. ft. manufacturing plant and general office.

**Crown Zellerbach Corp.**, San Francisco, has purchased 30 acres and optioned an additional 20 acres of industrial property in St. Louis, Mo., for a projected multi-million-dollar plant to produce flexible packaging materials. The plant would be part of the Western-


Americans now consume over 2½ billion pounds of crackers and cookies annually—a 25% increase within 7 years. Rhinelander Glassine shares an important role in this protective packaging market.
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Bakers find Rhinelander Glassine the economical answer for inner bags, liners, unit packs, wraps, laminated and corrugated trays and dividers. This versatile paper works smoothly with automatic and high speed packaging equipment.

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panies. The organization will be known as **Harris-Intertype Corp.**

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## Plants and people

Waxide Specialty Packaging Div. and would include the most modern equipment for the production of papers, films and foils. It is expected to include multicolor rotogravure and letter presses.

**C. S. Cullenbine** has been elected secretary of Crown Zellerbach, replacing **D. R. Schmidt**, who has been appointed general manager of Canadian Western Lumber Co., Ltd., wholly owned subsidiary of **Crown Zellerbach Canada, Ltd.**

The recently formed **St. Francisville Paper Co.**, St. Francisville, La., has elected seven officers headed by **Reed O. Hunt** as president. Mr. Hunt is executive vice president of Crown Zellerbach, which, with **Time, Inc.**, formed the new company. Board members include **Charles L. Stillman**, Time, Inc.; **David Brumbaugh**, Time, Inc.; **A. B. Layton**, president of Crown Zellerbach, and Mr. Hunt. Mr. Layton and **H. F. Carpenter** will be vice president; **D. R. Schmidt**, secretary; **H. E. Nylund**, treasurer; **L. F. Beckers**, comptroller, and **C. S. Cullenbine**, assistant secretary. All officers are Crown Zellerbach executives.

**Edward H. Walthers** has been appointed manager of Crown Zellerbach's distributor sales division. He succeeds **G. S. Runyan**, recently named vice president for general paper sales.

**Atlantic Gummed Paper Corp.**, Brooklyn, has elected **Saul Warshaw** as presi-

S. Warshaw N. Warshaw Oliver

dent. **Juan Oliver** has been named to the vice presidency, and **Nathan Warshaw** is now chairman of the board.

**Stokes & Smith Co.** and **Kingsbury & Davis Machine Div., Food Machinery & Chemical Corp.**, have opened a new Chicago office at 5 N. Wabash Ave., with **W. E. Buswell**, sales supervisor; **L. C. Glancy**, district service supervisor; **R. E. Bradford**, sales engineer; **B. L. Gambill**, service engineer.

**Eugene M. Tyndall** has been appointed assistant general sales manager at **Brockway Glass Co., Inc.**, Brockway, Pa. **William S. Borland** has been named sales manager of the prescription ware division. **J. Kirby Hook** will be district sales manager in the Cincinnati-Louisville territory.

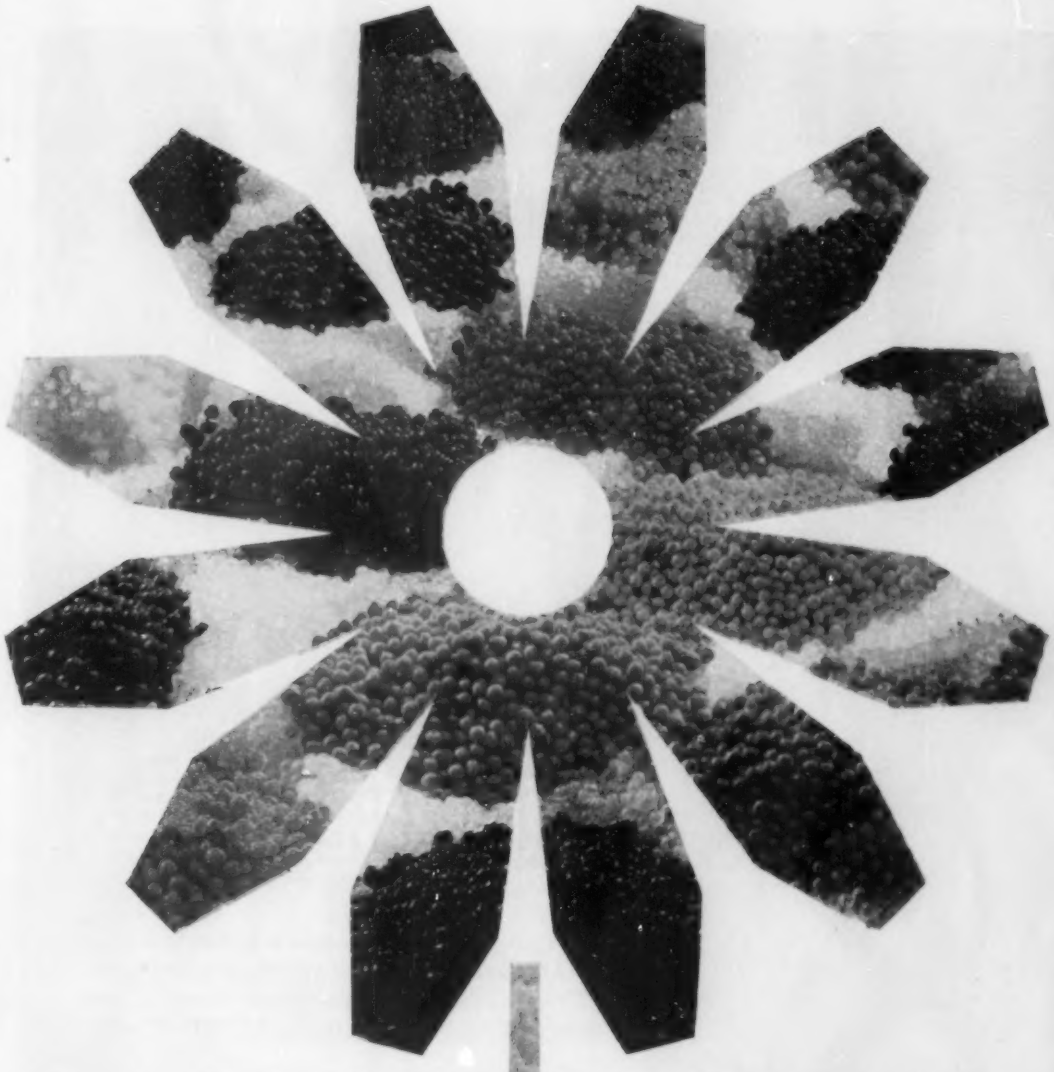
**National Adhesives (Canada), Ltd.**, Toronto, has appointed **Gerald W. Burgoyne** as sales manager of the Montreal

*Waxed and printed grades available through leading converters.

Rhinelander, Wisconsin

Subsidiary of St. Regis Paper Company





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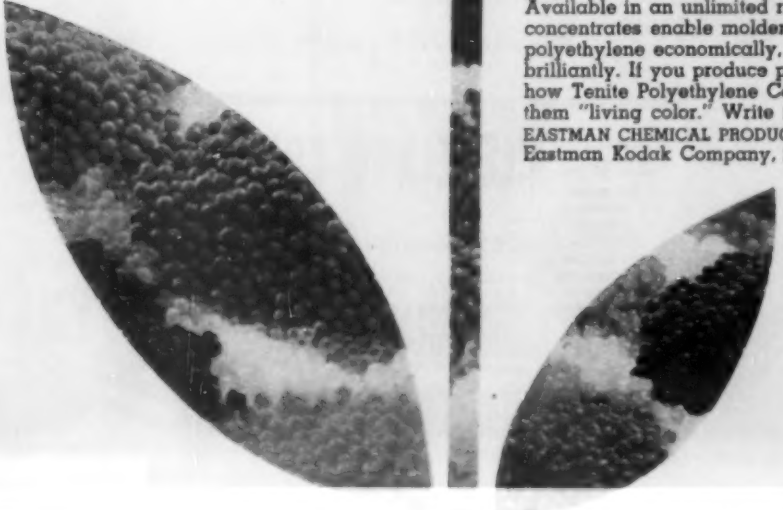

Tenite Polyethylene Color Concentrates are pellets of polyethylene containing quantities of coloring agents. Available in an unlimited range of colors, these concentrates enable molders and extruders to color polyethylene economically, uniformly and brilliantly. If you produce products of polyethylene, find out how Tenite Polyethylene Color Concentrates can give them "living color." Write for information to: EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.

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Toronto, has appointed Gerald W. Burgoyne as sales manager of the Montreal

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Tin Slip Cover
Friction Plug Can
Unit Pack Can
Convolute Can: Square, Round, Oblong
Nickeloid Turn Sifter Top
Metal End Telescope Case
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ALL BASIC TYPES

Quality fibreboard provides RIGIDITY and STRENGTH . . . choice of liners ensures PROTECTION as required . . . pre-printed wrappers, direct printing or plain color wraps supply ATTRACTIVENESS.

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We manufacture tubing of every kind, type and size in chipboard, jute, kraft, fish paper, etc., in light or heavy wall . . . in diameters up to 24". Also investigate Cleveland tubing for electrical uses.

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## Plants and people

Div. **Norman Riley** is manager of the division. **George L. Trubin** has been assigned to the post of production manager, with headquarters in Toronto. **William D. Ball** is supervisor of consumer products sales, a new post.

Under a new organizational arrangement designed to provide more highly

Kettrick Nalle Otto

specialized sales service for customers, **West Virginia Pulp & Paper Co.**, New York, will now sell its packaging papers and paperboard through four sales groups, each managed by a sales representative experienced in his particular field. **Robert S. Kettrick** will handle containerboard; **Alfred S. Nalle**, kraft paper; **George G. Otto**, bleached boards, and **W. D. Ashton**, white converting papers. **William T. Rehling** has been named sales manager for the New York district.

Ashton

**Fred T. Renshaw** has been named a vice president of **The Ottawa River Paper Co.**, Toledo, Ohio.

**Consolidated Lithographing Corp.**, Carle Place, Long Island, N. Y., has opened a display workshop at 13 W. 28 St., New York.

Rader

**Connecticut Chemical Research Corp.**, Bridgeport, Conn., contract packager of aerosols, has appointed **Charles O. Rader** as sales manager of the company's contract packaging division. Mr. Rader has been associated with the aerosol industry for 10 years.

**Acme Steel Co.**, Chicago, has appointed **Bartlett Richards** vice president and assistant to the president. **Harry R. Sanow** has been named vice president of operations at the Riverdale plant, where **Joseph H. Myers** is now superintendent.

At **Spencer Chemical Co.**, Kansas City, Mo., five new vice presidents were recently elected. **J. C. Denton** is vice president in charge of agricultural chemicals. **H. R. Dinges** is vice president for industrial chemicals and **Frank Pyle** is vice president for plas-

How many of these—
can you save with unidentified wrappings?
Actually . . . very few! Cost for adding print DECORATION to any Thilco paper is surprisingly low. In fact, it costs you *only a fraction more* than plain, uninteresting papers. Thilco DECORATED papers give you so much extra, too. They provide product identity, stimulate more sales, and give you much more in merchandising values—to say nothing of the protective benefits that are also yours with the numerous *kinds of functional* papers Thilco produces and offers.
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LOOK WHAT PENNIES BUY HERE IN TRADE-NAME IDENTITY
Looking for new merchandising ideas? HOBBY-LAND of Hackensack doesn't miss a trick. Taking advantage of FREE advertising space, they decorate with their colorful, attractive trademark, which not only attracts widespread attention on each delivery truck but also adorns their protective wrapping papers, boxes and bags for further widespread attention—Papers furnished by THILCO, of course!
HOBBY LAND
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Mentholatum knows well, the value of brand name merchandising and product identity. They know too, how little extra it costs to PRINT-DECORATE their trademark in the FREE advertising space their bulk wrappers provide. Also, to help merchants quickly identify their inventory of product tubes and jar sizes Mentholatum utilizes different colors of THILCO kraft wrappers for each type of bulk pack.
MENTHOLATUM
A FEW CENTS EXTRA — AND EVERYONE KNOWS WHO MAKES IT
Westinghouse takes advantage of Thilco Print-Decorated wrappers for product identification, eye-appeal attraction, simplified inventory — and gets a traveling advertisement from factory to consumer!
Take advantage of the FREE space your product wraps offer. Investigate Thilco DECORATED papers and reap the bonus benefit of protection *plus advertising*.
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Write for free kit of Trade-marked papers and complete listing of Thilco PROTECTIVE grade papers.
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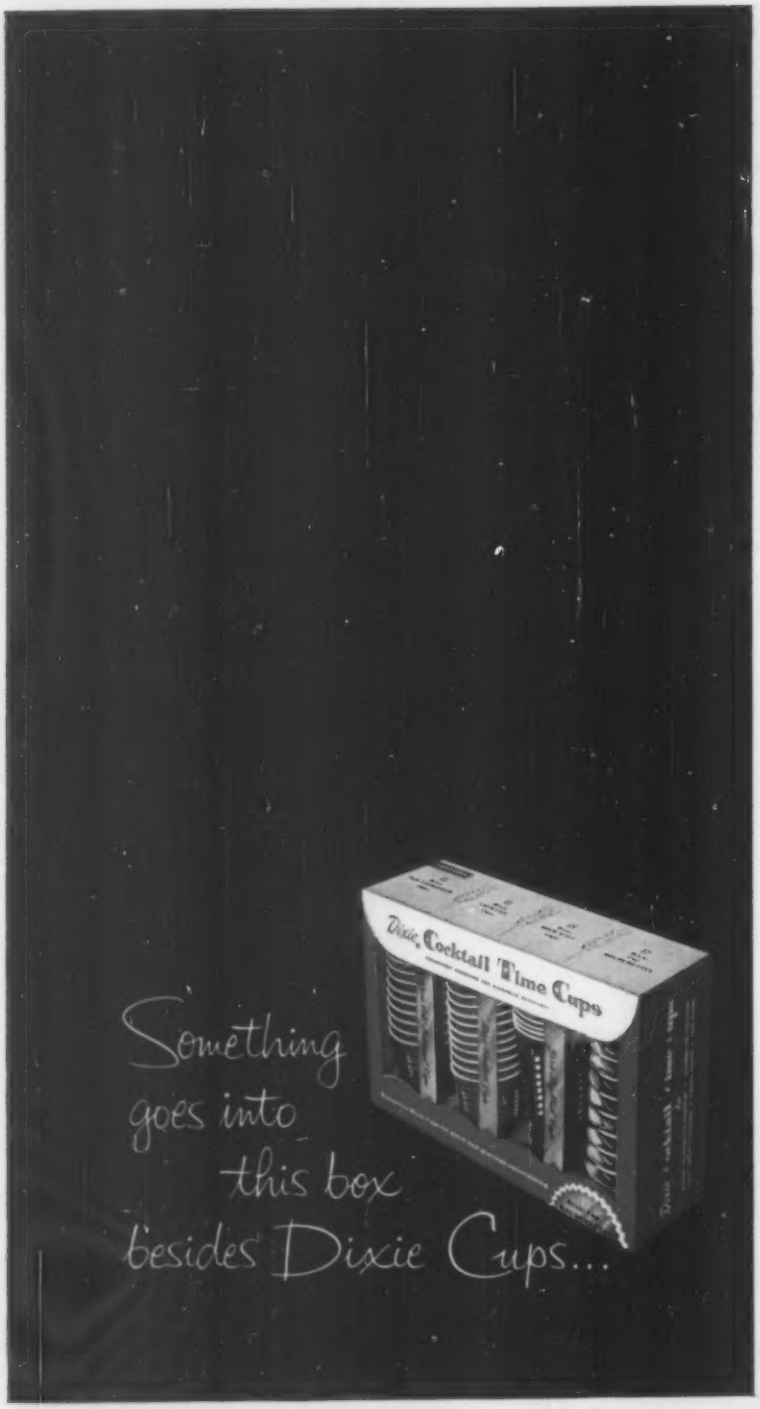
THILMANY PULP & PAPER COMPANY
KAUKAUNA • WISCONSIN




FEDERAL PAPER BOARD COMPANY, INC.

NATIONAL FOLDING BOX DIVISION

MORRIS PAPER MILLS DIVISION

SALES OFFICES: NEW YORK, N. Y.; CHICAGO, ILL.; NEW HAVEN AND VERSAILLES, CONN.; BOGOTA, N. J.; BOSTON AND PALMER, MASS.; CLEVELAND AND STEUBENVILLE, OHIO; PHILADELPHIA AND PITTSBURGH, PA.; MARION, IND.

FOLDING BOX PLANTS: BOGOTA, N. J.; NEW HAVEN AND VERSAILLES, CONN.; PALMER, MASS.; STEUBENVILLE, OHIO; PITTSBURGH, PA.; MORRIS, ILL.; MARION, IND. PAPER BOARD MILLS: BOGOTA, N. J.; NEW HAVEN, MONTVILLE AND VERSAILLES, CONN.; MORRIS, ILL.; READING, PA.; STEUBENVILLE, OHIO; WHITE HALL, MD.

## Plants and people

tics. **Dr. John R. Brown, Jr.,** was elected vice president in charge of research and development and **E. V. Friedrich** became vice president in charge of administration.

Ayers

Ploeger

**The Chase Bag Co.,** Chicago, has promoted **R. H. Ayers** to the position of sales manager of the paper bag division. **Roy H. Ploeger** has been named manager of the Toledo sales division. Mr. Ayers will now headquarter in New York. Mr. Ploeger will supervise sales in Ohio, Michigan and Indiana.

**Don Elder, Jr.,** has resigned as vice president, general sales manager and member of the board of directors of **Herb-Shelly, Inc.,** Farmington, Minn.

Candee

**Mark Candee** has been appointed president of the **American Partition Co.,** Milwaukee, Wis., a division of Standard Brands. American Partition also maintains offices and manufacturing plants in Bound Brook, N. J.; Merced, Calif., and Chicago, the latter plant functioning as the Traver Partition Co.

Under terms of a new partnership titled **Harper Landell & Associates,** the entire staff of **Harold Van Doren,** package designer, is to remain intact. The organization, under **Harper Landell,** will remain at 1717 Sansome St., Philadelphia. The change of title followed the death of **Mr. Van Doren** on March 3.

Foster

McDermott

**William H. Foster** has been appointed sales manager for the Nashua Package Sealing Div., **Nashua Corp.,** Nashua, N. H. **John F. McDermott, Jr.,** is assistant sales manager. Mr. Foster succeeds **George A. Coffin,** retired. Mr. McDermott has Mr. Foster's former position.

**Testing Machines, Inc.,** New York, have acquired the testing machine division of the **National Forge & Ordnance Co.**

**Herbert H. Hamburg** has been appointed special assistant in the New York sales department of **American Viscose Corp.,** Philadelphia. **Charles J. Cahill** succeed Mr. Hamburg as general office manager and special repre-

# Precision

## POLYETHYLENE CONTAINERS

LIGHTWEIGHT-UNBREAKABLE

STOCK SHAPES

Natural Color
Immediate Delivery

●

COLOR MATCHES
IMPRINTING
DECORATING
ON REQUEST

●

CHOICE OF CLOSURES,
DISPENSERS AND
OTHER ACCESSORIES

Progress WITH Precision

BOSTON ROUND
No. 408 & 476
1 oz. 2 oz. 4 oz. 6 oz.
8 oz. 12 oz. 16 oz. 32 oz.

OBLONG
No. 403
3 oz.

OVAL
No. 470
¾ oz. 1¼ oz. 2 oz.
3 oz. 4 oz. 8 oz. 16 oz.

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DIVISION OF
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MANCHESTER, N.H.
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PRISM CYLINDER
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2 oz. 4 oz. 6 oz.
8 oz. 12 oz.

TAPERED ROUND
No. 430
2 oz. 4 oz. 5 oz.
6 oz. 8 oz.

STRAIGHT CYLINDER
No. 435
8 oz.

RIGID HI-TEMPERATURE
WIDE MOUTH • No. 450
1 oz. 2 oz. 4 oz. 6 oz.
8 oz. 16 oz. 32 oz.

# PLAX
## PLASTIC CONTAINERS

- Immediate Delivery on Stock Items (from ¼ oz. to 13 gal.)
- Private Molds
- Packaging & Technical Service

**CALL YOUR LOCAL PLAX DISTRIBUTOR**

**ATLANTA 3, GEORGIA**
H. Smith Bottle Supply Co.

**BALTIMORE 2, MARYLAND**
Atlantic Glass Company

**BOSTON 27, MASSACHUSETTS**
S. H. Ansell & Sons

**BROOKLYN 17, NEW YORK**
J. Rabinowitz & Sons, Inc.

**BUFFALO 4, & SYRACUSE, N. Y.**
Empire State Bottle & Barrel Co., Inc.

**CHICAGO 8, ILLINOIS**
Continental Glass Company

**CLEVELAND 15, OHIO**
L. S. Kaufman & Sons

**DETROIT 11, MICHIGAN**
M. Jacob & Sons

**DOWNSVIEW, ONTARIO**
Plastic Bottle Sales Limited

**JACKSONVILLE 3, FLORIDA**
Smith Bottle Supply Co. of Jacksonville, Inc.

**MEMPHIS 2, TENNESSEE**
Wurzburg Brothers Inc.

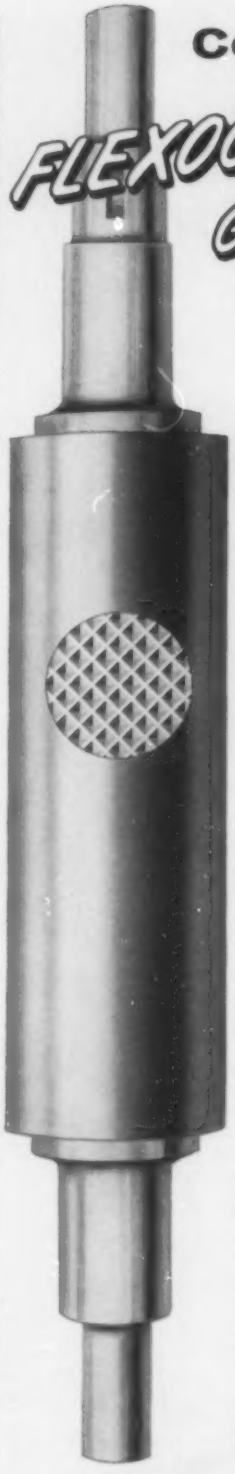
**MILWAUKEE 4, WISCONSIN**
W. B. Bottle Supply Co., Inc.

**MINNEAPOLIS 11, MINN.**
Twin City Plastic Package Co.

**PHILADELPHIA 46, PENNA.**
Zuckerman-Honickman, Inc.

**PITTSBURGH 19, PENNA.**
Samuel Mallinger Co.

**ST. LOUIS 7, MISSOURI**
Northwestern Bottle Company



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**Paper Machinery and Research · Inc**
1014 OAK STREET,
ROSELLE, NEW JERSEY

WRITE FOR INFORMATION ON NEW MICRO-LOK DEMOUNTABLE PLATE CYLINDERS

## Plants and people

sentative of the Film Div.'s Philadelphia headquarters. **John P. McDermott** has been appointed sales representative for Avisco cellophane in metropolitan New York, Westchester County and parts of Long Island. He replaces **Dwight H. Rollins,** resigned. **Lewis M. Young** has been named trade show manager for Avisco cellophane and will assist **Charles R. Shaffer.**

Garnett

**Stephen H. Garnett** has been promoted from acting manager to manager of canned and frozen foods market sales, **Reynolds Metals Co.,** Louisville, Ky. Mr. Garnett joined Reynolds in 1949 and has held various packaging sales positions with Reynolds.

**Fred K. Shankweiler** has been named director of sales of the cellulose products department of **Hercules Powder Co.,** Wilmington, Del. He succeeds **Werner Brown,** now assistant general manager of the department.

**Ralph C. Raymond** has been appointed eastern industrial district manager for **Wood Conversion Co.,** St. Paul, Minn. He will headquarter in New York. **N. Apollonio** will represent the company in northern California.

**Harold J. Green** has been promoted to staff assistant to the general sales manager of **Western-Waxide Specialty Packaging Div.,** Crown Zellerbach Corp., San Leandro, Calif. He will assist in the coordination of over-all sales policies and will supervise the sales service departments in each of Western-Waxide's five production plants. **Robert Zilligen,** previously a sales representative in the Chicago office, has taken over Mr. Green's former position as sales service manager.

Green

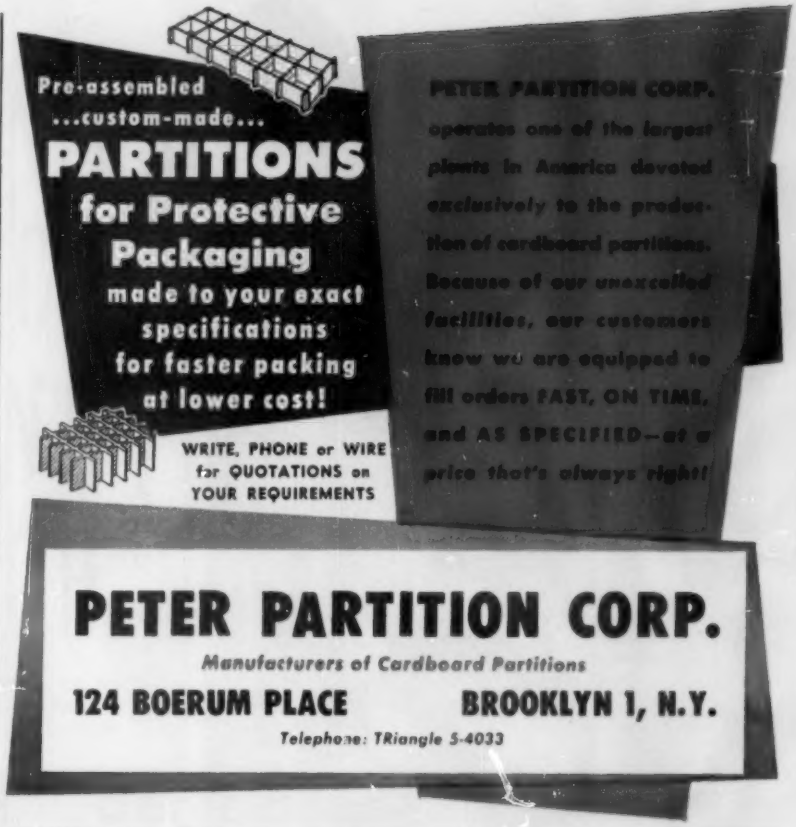
Zilligen

A new sales office has been opened in the Federal Reserve Bank Bldg., Cincinnati, Ohio, with **Richard Dunbrook** in charge.

**Mary L. Hannigan** will head the newly formed public relations department at **Jim Nash Associates, Inc.,** New York.

**Richford Corp.,** Oceanside, Long Island, N. Y., has moved its general sales office and showroom to 350 Fifth Ave., New York.

**Ralph Huntley** has been assigned to represent **Tee-Pak, Inc.,** Chicago, in northern California and Nevada, working from the San Francisco sales of-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DAVIDSON DUAL-LITH Model 245 is one of the most popular small offset machines in the imprinting and numbering field today. This versatile machine imprints and numbers cartons, envelopes, booklets, cards and heavy stock. It is also ideal for quality offset reproduction of catalog pages, bulletins, folders, direct mail—even pieces of odd shapes and sizes. Model 245 imprints by three methods: Linotype slugs, rubber plates or presensitized offset plates. It also produces bank note quality numbering, plus perforating! You get close register and alignment because Davidson's patented gripper bar chain delivery has positive control over every sheet, from impression to delivery. Ask for "Questions & Answers" booklet and Bulletin on "Numbering" ...use the handy coupon.
Model 245 equipped with new continuous load feeder and mechanical jogger
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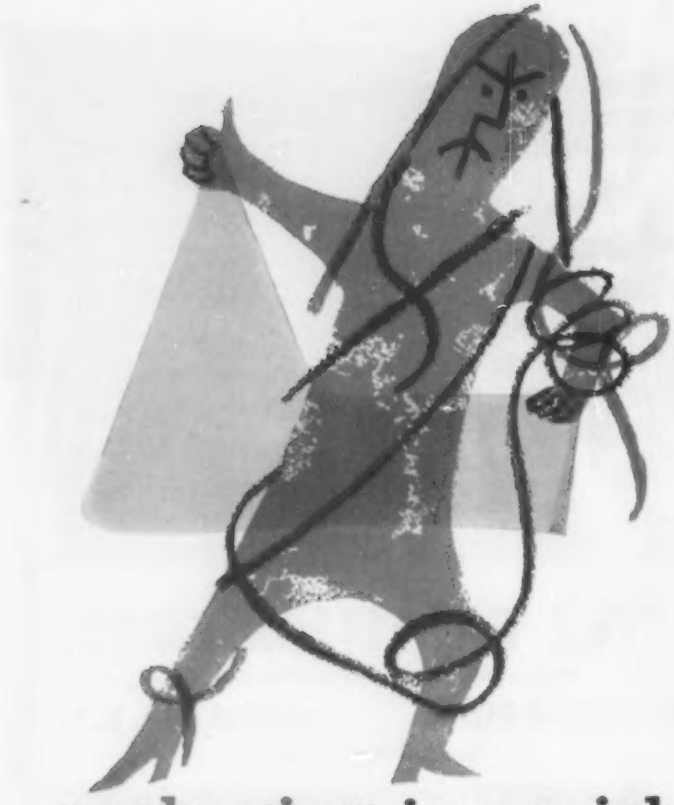
City Zone State
Headings in Protype • Text in Linotype



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We've been thirty years finding out about packaging . . . and what makes packaging that sells. We'll never stop finding out!

It all adds up to a tremendously useful body of specialized know-how . . . and modern equipment, including 6-color flexographic and rotogravure presses . . . to help you lick your packaging headaches, brighten up your packaging picture.

The proof of the pudding, of course, is what we have done to give so many of America's great products a packaging pick-me-up—and we'll be glad to show you.

We've also found that the packaging is 10% inspiration, and 90% service—keeping our customers fully supplied *always*, on a schedule geared to their needs.

Whether your packaging involves film, paper, laminates, or foil, we'd like nothing better than to sit down and talk packaging with you—*your* packaging.

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CONVERTERS AND COLOR PRINTERS OF QUALITY PACKAGING
from: Glassine, Cellophane, Polyethylene, Vinyls, Parchment, Sulphite, Foil, Kraft, Waxed, Coated and Laminated Materials.

## Plants and people

fice. **Robert F. Seachrist** has been named sales representative for eastern Pennsylvania, Maryland, Delaware and the District of Columbia.

**Roy Larsen** has been elected a vice president of the **Raymond Loewy Associates**, New York.

**Southland Paper Converting Co.**, Los Angeles, has announced a change in the company name to **Fortifiber Corp.** and an extensive expansion program. The Southland Paper Converting Co. will continue as a division of Fortifiber Corp., manufacturing bags and papers.

Proctor

**J. D. Proctor**, general sales manager of the **Celluplastic Corp.**, Newark, N. J., has been elected a vice president. Mr. Proctor joined the firm in 1954 as western sales manager and became general sales manager in 1956. The company makes plastics containers.

**Sun Chemical Corp.**, Long Island City, N. Y., has elected **Norman E. Alexander** as president and a director. He succeeds **Ralph C. Persons**, retired. New members of the board are **Ralph Stillman, Howard Vultee, William Steinschneider** and **Joseph E. Harris.**

**A. N. Wohlwend**, director of commercial development at **Escambia Chemical Corp.**, New York, has been elected vice president. **Erhart K. Drechsel** has joined the company as director of commercial development activities.

**Robert J. Decker** has been elected vice president and treasurer of **Emhart Mfg. Co.**, Hartford, Conn.

**The L. A. Whitney Co., Inc.**, has moved to new quarters at 50 Kearney Rd., Needham, Mass. **William A. White, Jr.**, has joined the sales engineering staff.

**Tele-sonic Packaging Corp.**, New York, has opened a branch office in Chicago at 6930 N. Clark St., with **Gale A. Sherman** in charge.

**H. M. Smyth Co., Inc.**, St. Paul, Minn., have recently completed a move to their new production plant in St. Paul.

**Norman H. Laughrey** has joined **The Black-Clawson Co.'s** Dilts Div. at Fulton, N. Y., as technical service director.

**Frank Stapleton** has become manager of the Tampa sales office of **Sinclair & Valentine Co.**, New York. He replaces **Jack Cummings**, now head of the Jacksonville branch. **Charles Cafazza** now manages the St. Louis branch.

**Brea Chemicals, Inc.**, of Los Angeles, a subsidiary of Union Oil Co. of Cali-

for PENNIES

CLAREMONT FLOCK

an OUNCE

adds a "POUND

PACKAGE

of PUNCH"

Claremont Flock is lush as plush. Looks like Velvet. Feels like Suede. Converted by the Paper Trade. Cost is Low . . Packages Glow . . Sales Go. See Samples? Wonderful! Will Do—Rush!

CLAREMONT WASTE MANUFACTURING COMPANY
The Country's Largest Manufacturer of FLOCK
CLAREMONT, NEW HAMPSHIRE

Distinctive Plastic Containers

J-E invites your inquiry on semi-rigid plastic packaging designed to give your product maximum sales appeal at the point of purchase.

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# *Helpful literature...* **free!**

**LITHOGRAPHED METAL CONTAINERS.** 16-page brochure presents illustrations and description of company's metal container service. Includes design, artwork, lithographing, and fabricating of such container types as round, oval, single-friction, suitable for food, medicinals, chemicals. J. L. Clark Manufacturing Co. **(D-751)**

**PLASTIC COATING FOR PACKAGING.** Illustrated booklet contains case-history discussions of company's polyvinyl chloride latices used as coatings for fibre drums, cardboard containers, and tape. B. F. Goodrich Chemical Co. **(D-779)**

**SINGLE-PORTION PACKETS.** Illustrated folder describes machine that forms, fills and closes packets made of foil, paper, cellophane, or polyethylene laminates used for packaging free-flowing powders such as sugar, flavored drink powders. Brown Bag-Filling Machine Co., Inc. **(D-775)**

**PACKAGING DISPLAYS.** Illustrated booklet discusses factors involved in the successful selection of corrugated point-of-purchase packaging displays. Also illustrates typical uses of these displays. Hinde & Dauch. **(D-762)**

Any of the booklets described here, plus many others—forty-two in all—are available for the asking, without charge or obligation.

Just turn to the Manufacturers' Literature Page in this issue (It's printed on heavy paper), circle the numbers corresponding to the booklets you want, fill in the reply postcard, and mail. No postage needed.

We'll see that your request is routed to the manufacturers promptly.

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**MODERN PACKAGING**

A BRESKIN PUBLICATION

575 Madison Avenue New York 22, N.Y.

**CORRUGATED GIFT CONTAINERS.** 8-page illustrated folder describes Illinois company's package design service for creating gift packages and illustrates several corrugated containers that have been printed by company. Stone Container Corp. **(D-761)**

**POLYETHYLENE FILM SAMPLE.** Literature describing company's new grade of polyethylene flat and gusseted tubing is enclosed in a bag made from the material. Said to have high clarity, strength, and slip qualities. Plastic Horizons, Inc. **(D-753)**

**AEROSOL VALVES.** Illustrated folder describes line of aerosol valves available with five actuator types for various dispensing functions. Includes diagram of design features. The Risdon Manufacturing Co. **(D-778)**

**VARIABLE DATA LABEL PRINTER.** Literature describes machine that uses either stencils or rubber plates to print product identification labels, including those with variable data such as part numbers, codes, sizes, dates. Weber Marking Systems. **(D-766)**

# Creative Papers from Mosinee

*...are custom-tailored to specific needs...particularly packagers'*

## Paper times a flare to insure safety margins

LAKESIDE RAILWAY FUSEE CO. makes the flares used to warn a train "someone's on the line" ahead. Doing the job well involves considerably more than pouring flammable chemicals into a paper tube. For example, the paper tube itself must burn at a pre-determined rate. Too fast, and there's no receptacle for the chemicals. Too slow, and the paper tube forms a chimney that hides the light of the flare.

Problem — who can develop and make paper that's predictably combustible.

MOSINEE! For 30 years Mosinee has been creating special sulphate papers just to meet such unusual needs. And they may be able to do the same for you. Mail the coupon and see.

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CITY_____ ZONE_____ STATE_____


## Plants and people

fornia, has established a national sales organization for its new polyethylene plastic materials, including high-density resins. **James G. Baldwin**, manager of industrial chemical sales, will supervise the national marketing effort. A sales-service laboratory is being constructed for development of product applications. **John J. Keville** will be sales manager in the east and **James L. Todd** in the midwest.

A new formaldehyde plant with an annual production capacity of 36 million pounds has been opened at Kent, Wash., by the Chemical Div. of the **Borden Co.**, New York. The Karl Fischer process, the rights for which were leased from Apparate und Rohrleitungsban, West Germany, will be used.

**John F. Connelly**, member of the board of directors and chairman of the executive committee, has been elected chairman of the board of **Crown Cork & Seal Co., Inc.**, Baltimore, Md.

**Atlas Plywood Corp.**, Boston, Mass., has elected **Richard D. Bolster** vice president.

**Plastic Horizons, Inc.**, Paterson, N. J., has acquired **Raritan Plastics Corp.**, Bound Brook, N. J. Raritan will operate as a subsidiary.

**Embry Container Corp.** of Louisville, Ky., has commenced a half-million-dollar expansion program which is to include increased production facilities for corrugated shipping containers and modernization of the Louisville plant. Embry is affiliated with **Alton Boxboard Co.**

A new packaging division, under the direction of **R. F. Hrudka** as sales manager, has been set up by the **Arvey Corp.**, Chicago. The company's Topper Division, fabricating transparent lids for foil containers, will be supervised by **Herbert Mayer.**

**Jack C. Baldwin** has been appointed western director of national accounts for the bag division of **Fulton Bag & Cotton Mills**, New Orleans, La. He will headquarter in Los Angeles.

**David G. Freiberg**, former sales representative for **Continental Paper Co.**, Ridgefield Park, N. J., has been appointed assistant sales manager.

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**Edward C. Lake**, 61, manager of converter sales for the Film Dept. of **E. I. du Pont de Nemours & Co., Inc.**, Wilmington, Del., died on Feb. 9. Mr. Lake, who had been with Du Pont since 1924, was one of the firm's pioneer cellophane salesmen.

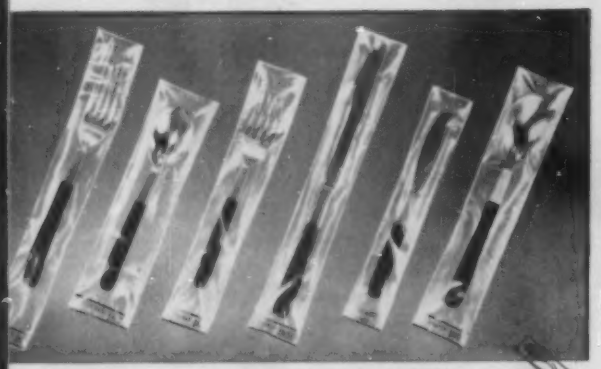
There is a difference in polyethylenes . . . specify a

# Du Pont ALATHON®

POLYETHYLENE RESIN

for your packaging needs

Soft goods packaged in strong, transparent film of ALATHON are kept clean, unmussed and attractive. Since ALATHON does not become brittle even at low temperatures, or deteriorate, shelf life is extended . . . goods like this nightgown are always clearly visible at their sales-appealing best. *(Film of ALATHON extruded by Mitron Plastics Corp., Brooklyn, New York; packaging by Action Bag Co., Brooklyn, for Sandra Undergarment Co., Inc., New York.)*



The extra tear strength of ALATHON makes it readily adaptable for packaging exquisite hard goods, such as this Lunt silverware. Even sharp, bulky hardware items remain in factory-perfect condition during shipping, selling and handling. *(Film of ALATHON by Deerfield Plastics Co., Inc., South Deerfield, Mass., for Lunt Silversmiths, Greenfield, Mass.)*

Coatings and laminates of ALATHON are tasteless, odorless and non-toxic . . . offer easier heat sealing and moisture resistance to a variety of food-product packages. The vacuum-packed meat shown here is kept fresh and appetizing longer because of a coating of ALATHON. *(Packaging of Du Pont MYLAR® polyester film coated with ALATHON polyethylene resin by United States Packaging Corp., Paterson, N. J., for Plymouth Rock Provision Co., Bronx, N. Y.)*

Molded of lightweight, unbreakable ALATHON, this nozzle pours freely when the can is tipped . . . yet won't drip a drop when pouring is finished. Since ALATHON is unaffected by most chemicals, the nozzle resists detergents, rust inhibitors or other contents. *(Nozzle of ALATHON molded by the American Can Co., New York, N. Y.)*

DU PONT

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

*Polychemicals Department*

PACKAGING TRENDS Film · Molded Products · Coatings

OVER

# If the moon were cheese

. . . and interplanetary space ships could transport this celestial product earthward, chances are its heavenly flavor would be protected with film of Du Pont ALATHON.

Today, more and more terrestial products of all kinds . . . foodstuffs, soft goods, hardware . . . are being better protected . . . more attractively packaged in tough, transparent film of ALATHON.

Used in food packaging, film of ALATHON safely protects the contents without taste or odor. And since film of ALATHON retains flexibility at temperatures as low as −100° F., it is ideal for packaging frozen-food products.

Crystal-clear and extra-strong, film of ALATHON keeps fine fabrics clean and unmussed during handling, shipping and selling. Soft goods are always clearly visible at their sales-appealing best.

Film of ALATHON is the best material in a blue moon for packaging bulky, sharp-cornered items. Even if the film is punctured, the great notch resistance of ALATHON will retard further tearing.

Film of ALATHON is unaffected by moisture, grease or oils, yet may be easily and attractively printed. Because ALATHON does not become brittle or deteriorate, it extends the shelf life of many products.

Truly an out-of-this-world packaging material, film of ALATHON can help your product eclipse all competition. Why not find out how? Simply clip and mail this coupon.

**There is a difference in polyethylenes**

**specify a Du Pont ALATHON®**
POLYETHYLENE RESIN

**for your packaging needs**

E. I. du Pont de Nemours & Co. (Inc.), Polychemicals Dept.
Room 304, Du Pont Building, Wilmington 98, Delaware

In Canada: Du Pont Company of Canada (1956) Limited, P. O. Box 660, Montreal, Quebec.

**SEND FOR INFORMATION**

For additional property and application data on Du Pont ALATHON polyethylene resin, mail this coupon.

*Name*_____
*Company*_____
*Position*_____
*Street*_____
*City*_____
*State*_____
*Type of Business*_____

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

# For your information

The Technical Assn. of the Pulp & Paper Industry has elected Ward D. Harrison of Riegel Paper Corp. as president. Dr. Harrison was named vice president in 1955 following his second three-year term as a member of the executive committee. He has also served as chairman of the association's Pulp Preparation Committee, Pulp Purification Committee and Local Sections Committee.

Harrison

The Packaging Machinery Mfrs. Institute has moved to new and larger quarters in the Lincoln Bldg., 60 E. 42 St., New York 17.

William R. Adams of St. Regis Paper Co. will address the Eighth Annual Coating Conference of the Technical Assn. of the Pulp & Paper Industry, to be held at the Hotel Pfeister, Milwaukee, May 20-23. Theme of the conference is, "The Manufacturing and Processing of Coated Paper and Paperboard."

The Polyethylene Extrusion Coaters Group of Specialty Paper and Board Affiliates, Inc., elected C. W. Hoffman of Riegel Paper Corp. as its chairman during its recent annual meeting. John D. Johnston of Union-Bag Camp Paper Corp. was named vice chairman. Elected to the executive committee are Guy E. McCorison of Thilmany Pulp & Paper Co., C. Carr Sherman of H. P. Smith Paper Co., E. C. Garwood of Crown Zellerbach Corp., Donald McBride, Jr., of Lowe Paper Co., Russell C. Flom of Marathon Corp. and William S. Kemp, Jr., of Crocker, Burbank Papers, Inc. Speaker at the meeting was Charles A. Southwick, Jr., technical editor of MODERN PACKAGING, who spoke on polyethylene extrusion coating.

The National Wooden Pallet Mfrs. Assn. elected the following officers at its recent 10th semi-annual meeting: Walter G. Moeling, III, president, Ellis C. Goodwin and A. B. Farris, vice presidents; W. H. Sardo, Jr., executive vice president and secretary; Frank H. Woodward, treasurer. New directors include Mr. Moeling, Mr. Goodwin, Mr. Farris, Mr. Woodward, Harold L. Posner, A. S. Binley, Jr., W. R. Jordan, Thomas N. dePew, Charles L. Larson, Lee S. Settel, Alex M. Campbell and C. A. Dorr.

George J. Cadotte, Sr., of Central Waxed Paper Co. has been elected chairman of the board of directors of the Waxed Paper Institute. Other new officers are William P. Lyle, Jr., of Nashua Corp., vice chairman of the board, and Robert M. Koch of Zimmer Paper Products, Inc., secretary-treasurer.

"The Effect of Nuclear Explosions on Semiperishable Foods and Food Packaging," the final report on Project 32.4 of Operation Teapot of the Food & Drug Administration, is now available. The report covers one phase of the food-testing program carried out under the direction of Dr. E. P. Laug of the FDA. Other phases of the food tests concerning staple foods, canned foods, frozen foods, and meat and meat products are described in separate reports which are available from the Office of Technical Services, Dept. of Commerce, Washington 25, D. C. These are: WT-1163, "Effects of Nuclear Explosions on Bulk Food Staples"; WT-1212, "Effects of Nuclear Explosions on Canned Foods"; WT-1213, "Effects of Nuclear Explosions on Commercially Packaged Beverages"; WT-1214, "Effects of Nuclear Explosions on Semiperishable Foods and Food Packaging"; WT-1215, "Effects of Nuclear Explosions on Frozen Foods"; WT-1216, "Effects of Nuclear Explosions on Meat and Meat Products"; and WT-1222 "Exposure of Foods and Foodstuffs to Nuclear Explosions."

Morris Kane, director of research for the Kalamazoo Vegetable Parchment Co., has been re-elected chairman of the joint Technical Committee of the Waxed Paper Merchandising Council and the Waxed Paper Institute. All other members of the committee were re-elected to serve another term. Dr. J. S. Barton of Crown Zellerbach's Western-Waxide Specialty Packaging Div. and Hunter Phillips of Dixie Wax Paper Co. will serve as auxiliary members of the Technical Committee.

Container Laboratories, Inc., recently held the 1957 series of annual regional meetings of its Boxmakers' Quality Evaluation and Research Group. The group, composed of executives and technical men from a number of fibreboard box-manufacturing firms, meets each year to consider the effect of materials and manufacturing methods on box quality and performance.

The American Bottlers of Carbonated Beverages is now accepting entries for the Chesterman Award of $1,000 to the person or persons submitting the most outstanding scientific or technical contribution to the progress and advancement of the bottled soft-drink industry. For further information on the award, write to the Committee of Awards, American Bottlers of Carbonated Beverages, 1128 16 St., Washington 6, D. C.

A symposium on "What Price Packaging?" sponsored by the American Society of Industrial Designers and the Package Designers Council was held recently at the New York Museum of Modern Art. Panelists were Egmont Arens, Walter Landor, Donald Deskey, Francis Blod and Robert Sidney Dickens, package designers; A. P. Bondurant of Glenmore Distilleries Co.; Esther Foley of Macfadden Publications, and Dr. Charles Glock of Columbia University's Bureau of Applied Research.

G. B. Davis of The Baker-Raulang Co. has been named general exposition chairman for the 1957 National Industrial Packaging & Handling Exposition, scheduled to be held Oct. 28-31, Convention Hall, Atlantic City, N. J. To be held coincident with the exposition are the National Packaging and Materials Handling Competition and the SIPMHE Short Course. "Brainstorming for Profits—Practical Approaches to Better Packaging, Handling, Transportation and Distribution" is the theme of the Short Course, which will be headed by H. C. Rountree of Temple University.

E. C. Griepenkerl of Packaging Industries, Ltd., Inc., has been named Eastern regional director for the Society of Industrial Packaging and Materials

## What's doing

April 8-11—26th National Packaging Exposition and Conference, International Amphitheatre, Chicago.

April 10-12—Point of Purchase Advertising Institute, 11th annual exhibit, Palmer House, Chicago.

April 11-12—Fibre Box Assn., spring meeting, Ambassador Hotel, Los Angeles.

April 14-27—United States World Trade Fair, Coliseum, New York.

April 23-25—Research & Development Associates, Food & Container Institute, annual meeting, Richmond, Va.

April 29-May 3—National Materials Handling Show, Philadelphia, Pa.

May 1-5—National Paper Box Mfrs. Assn., 39th national convention, Eden Roc Hotel, Miami Beach, Fla.

May 2-3—Fibre Drum Mfrs., Assn., annual meeting, Commodore Hotel, New York.

May 14-21—Packaging Fair, Amsterdam, Holland.

May 15-17—Research & Engineering Council, Graphic Arts Industry, Inc., 7th annual meeting, Benjamin Franklin Hotel, Philadelphia.

May 20-23—Technical Assn. of the Pulp & Paper Industry, 8th annual coating conference, Pfeister Hotel, Milwaukee, Wis.

May 20-23—American Society of Mechanical Engineers, design engineering show and conference, Coliseum, New York.

May 21-23—American Pulp & Paper Mill Superintendents Assn., annual meeting, Congress Hotel, Chicago.

Type of Business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## For your information

Handling Engineers. Other SIPMHE regional directors re-elected for 1957 are **A. M. Lownsbury** of Railway Warehouses, Inc., for Mid-Continent area, and **C. Lippman** of U. S. Steel for the Western area.

**Robert E. O'Connor** has been appointed executive secretary of the **American Paper & Pulp Assn.** to succeed **E. W. Tinker**, who has retired. **Warren B. Bullock** has retired as manager of the Import Committee. Also announced by APPA is the availability of the association's Dictionary of Paper in 50 countries outside the United States and Canada. Copies are available from the association's offices, 122 E. 42 St., New York 17.

**The United States Steel Corp.** has released a new 27-min. color-sound film titled "Treasure Chest," which portrays the story of the metal can and its importance in today's economy. The film presents the procedure in making cans —from the production of tinplate to fabrication of the product, its use by the packaging industry and by the consumer. Prints of the film are available from U. S. Steel's Film Distribution Centers in Pittsburgh (525 William Penn Place), New York (71 Broadway), Chicago (208 S. LaSalle St.), San Francisco (120 Montgomery St.), Cleveland (Rockefeller Bldg.) and Fairfield, Ala.

**The Assn. of National Advertisers**, in cooperation with the **Point-of-Purchase Advertising Institute**, has issued a comprehensive book titled "Advertising at the Point of Purchase" (McGraw-Hill Book Co., Inc., 330 W. 42 St., New York 36; $6.95). This 248-page, illustrated reference guide is based largely on a survey conducted by A.N.A. of actual procedures of more than 150 leading advertisers representing more than 20 different product groups.

The 1956 "Statistical Abstract of the United States," popularly referred to as "Uncle Sam's Answer Book," is already in its second printing. The volume, compiled annually by the **Bureau of the Census, U. S. Dept. of Commerce**, is particularly useful to researchers. Copies, priced at $3.75, may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

**The Johns-Manville Dutch Brand Div.** has issued a new eight-page illustrated booklet describing the uses and advantages of its new 250-lb.-tensile-strength #400 strapping tape, titled "Dutch Brand Pressure Sensitive Strapping Tape." For free copies write to Johns-Manville Dutch Brand Div., 7800 S. Woodlawn Ave., Chicago 19.

New IPI Flexogem inks mark another step forward in the development of improved flexo inks for multiple purpose printing. Thoroughly tested commercially, Flexogem has proved superior for all grades of moisture-proof cellophane, Saran-coated cellophane, polyethylene and aluminum foil. It shows greater ability to prevent blocking and offsetting, runs cleaner on the press and has excellent gloss.

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**Celanese Acetate—longer shelf life for stationery and seasonal products.** Celanese Acetate does not become brittle with age. It resists shrinkage. Dust wipes off with a damp cloth. Paper products can be overwrapped with acetate months before the sales season. Acetate keeps them clean and salable—and the packages hold their shape and eye appeal. Acetate wraps also help reduce pilferage.

**Celanese Acetate Film stays flat and smooth**...Nothing destroys the effectiveness of a window box as much as a sagging, cockled or distorted window. Acetate Film stays flat, smooth and taut. There are no unsightly pull lines or cockling. Acetate windows are specified by leading merchandisers of candy, dry foods, bakery products, fresh produce, stationery, textiles, toys, haberdashery and many other consumer products.

**Celanese Acetate Film s-p-a-r-k-l-e-s like no other packaging material.** Of all the films available for packaging, Acetate is outstanding in its ability to stay sparkling clear under all conditions. It is a truly plastic film and has excellent resistance to aging. Acetate is grainlessly transparent. It doesn't dull, never loses its crispness. Acetate sparkles and sells...sparkles and sells.

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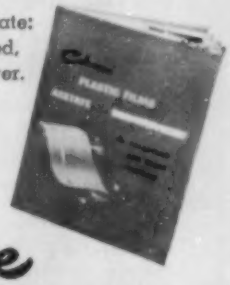

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# U. S. patents digest

**This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levy.**

**Apparatus for Forming Folded Reinforcements on Box Blanks,** D. C. Ellinger (to Downing Box Co., Milwaukee, Wis.). U.S. 2,775,923, Jan. 1. In an apparatus for folding a portion of a box blank on a score line which is spaced inwardly from an edge, means for moving blanks through the machine with said edge leading.

**Strip Feeding and Bursting Apparatus,** C. H. Dietz and R. W. Staneck (to Standard Register Co., Dayton, Ohio). U.S. 2,776,007, Jan. 1. A strip severing or bursting apparatus including a pair of snatching rollers and a relatively spaced pair of snubbing rollers, a rockable carrier upon which one roller of each pair is mounted for simultaneous intermittent movement toward and from the other roller of the respective pairs of rollers to grip momentarily therebetween a strip to be served.

**Dispensing Carton,** R. M. Stevens, Chicago, Ill. U.S. 2,776,052, Jan. 1. A roll-material dispenser of the character described comprising: an elongated folded carton comprising a simple sheet of paper and including bottom, front, back, end walls and hinged cover.

**Bottle Cap Closure,** F. J. Loretitsch, Brooklyn, N.Y. U.S. 2,776,065, Jan. 1. In a bottle having a neck formed with a pair of spaced-apart annular grooves, a bottle cap comprising a top wall, a relatively short cylindrical side wall extending down from top wall, a plurality of tabs depending from side wall.

**Closure for Containers,** E. H. E. Thornton, Odessa, Tex. U.S. 2,776,066, Jan. 1. The combination of a container having an open neck portion; a closure for said container having a cylindrical skirt portion; cooperating screw-thread elements carried, respectively, by said neck portion and said skirt portion engageable upon rotation of said closure relative to said container to draw said closure axially into sealing relation with the opening of said neck portion.

**Seal-Severing Device,** H. W. Seibel, Louisville, Ky. U.S. 2,776,067, Jan. 1. In a seal-severing device the combination comprising: a bottle, a closure cap for the bottle, a sleeve of plastic material overlapping bottle and cap, and having a small opening in said sleeve.

**Bottle-Carrier Handle Structure,** H. W. Forrer (to Atlanta Paper Co., Atlanta Ga.). U.S. 2,776,072, Jan. 1. A paperboard carrier for bottles and similar articles, said carrier comprising a bottom wall, opposed side walls joined to said bottom wall.

**Tape-Applying Movement,** A. E. Johnson, (to Minnesota Mining & Mfg. Co., St. Paul, Minn.). U.S. 2,776,068, Jan. 1. In a pressure-sensitive adhesive-tape applying machine, an applying movement of the character described comprising a pivoted arm, a first roller rotably mounted at the free end of the arm for conducting tape into adhesive engagement with the surface of an object at a tape-applying station.

**Carton,** W. A. Ringler (to The Gardner Board & Carton Co., Middletown, Ohio). U.S. 2,776,081, Jan. 1. A carton comprising a sleeve of uniform cross-section open at both ends and a slide having a bottom panel tapered from a wide end greater in width than the internal width of said sleeve toward a narrow end, less in width than the internal width of said sleeve to provide for insertion of said slide into said sleeve with the narrow end foremost.

**Egg Carton,** G. D. Bennorth, Mountain View, Calif. U.S. 2,776,082, Jan. 1. For forming an egg carton, a blank of bendable sheet material scored for folding into a central and two side portions.

**Knock-Down Container,** Sam Derman, South Orange, N.J. U.S. 2,776,083, Jan. 1. A collapsible container of the character described, comprising a single sheet of material cut and scored to form bottom, front, back and side walls and a top cover.

**Bag,** R. J. Williams (to Bemis Bro. Bag Co., St. Louis, Mo.). U.S. 2,776,084, Jan. 1. A bag comprising a length of multi-ply paper tubing and having at least a bottom closure, each ply of the tubing having a longitudinal seam constituted by overlapping inner and outer marginal portions of the ply adhered together in face-to-face relation by a stripe of adhesive extending the full length of the seam.

**Mechanism and Method for Assembling and Attaching Container Blanks,** Paul E. Fischer, et al. (to General Mills, Inc.) U.S. 2,776,606, Jan. 8. A mechanism for assembling and attaching container blanks comprising, in combination, a pair of rollers for feeding a web of carton-forming material.

**Mechanism for Preparing Blanks,** P. E. Fischer, et al. (to General Mills, Inc.). U.S. 2,776,607, Jan. 8. The method of preparing blanks for a container which comprises forming a first sheet of container material, forming a second sheet of container material and positioning the second sheet on the first.

**Method of Making a Multi-Layered Container,** Paul E. Fischer, et al. (to General Mills, Inc.). U.S. 2,776,608, Jan. 8. The method of making containers having a plurality of layers of material which comprises assembling a plurality of sheets of material.

**Mechanism for Making Containers,** Paul E. Fischer, et al. (to General Mills, Inc.). U.S. 2,776,609, Jan. 8. A mechanism for forming containers comprising a device for holding a container blank while it is formed into a container and for carrying the blank, folding means for forming container from blank.

**Cutting and Creasing Press,** L. W. Roselius (to S&S Corrugated Paper Machinery Co., Inc., Brooklyn, N.Y.) U.S. 2,776,610, Jan. 8. A cutting and creasing press comprising a bed; means for supporting a die on said bed; a quadrant positioned to roll on said die.

**Automatic Power-Driven Tape Serving Machine,** E. E. Lakso (to Nashua Corp. of Mass.). U.S. 2,776,833, Jan. 8. In a tape dispenser, separable rolls for feeding the tape, a motor to drive one of the rolls, tape-measuring means operating with one of the rolls, a variably settable length selector.

**Box Strapping Tool,** H. A. Smith (to The Stanley Works, New Britain, Conn.). U.S. 2,777,344, Jan. 15. In a box strapping tool of the type having a frame, a sealing mechanism supported in said frame for movement between a rest position and a sealing position.

**Sand-Grain Core Insecticidal Composition,** J. F. Les Veaux and E. F. Orwoll (to Food Machinery & Chemical Corp.). U.S. 2,777,795, Jan. 15. An insecticidal composition in the form of a pellet comprising a core of a grain of silica of 20 to 60 mesh and a coating upon said silica grain of a finely ground argillaceous mineral powder of about 325 mesh carrying an organic insecticide.

**Hand Tape Dispensers,** A. P. Krueger (to Derby Sealers, Inc., Ansonia, Conn.). U.S. 2,777,594, Jan. 15. A hand-holdable tape dispensing device comprising a cylindrical tape roll supporting member adapted to receive a roll of tape thereon, a yoke member having a body portion and spaced legs to straddle said supporting member.

**Container and Easy-Opening Cover Therefor,** W. E. Cheeley (to Reynolds Metals Co., Richmond, Va.). U.S. 2,777,601, Jan. 15. In containers, a cover made of manually tearable metal and having a peripheral downwardly extending channel formation with a bridge separating opposed channel areas at opposite ends of the cover in such manner that the ends of each channel abut vertical walls formed by bridge areas.

**Cardboard Folding Box Construction,** S. Conescu, Neponsit, N.Y. U.S. 2,777,628, Jan. 15. In a folding box having hinged side and end panels which are edgewise connected to each other by a diagonally folding web arranged to lie in the set-up condition of the box against one of the panels.

**Folding Carton With Self-Locking Cover,** B. D. Osteen (to Birmingham

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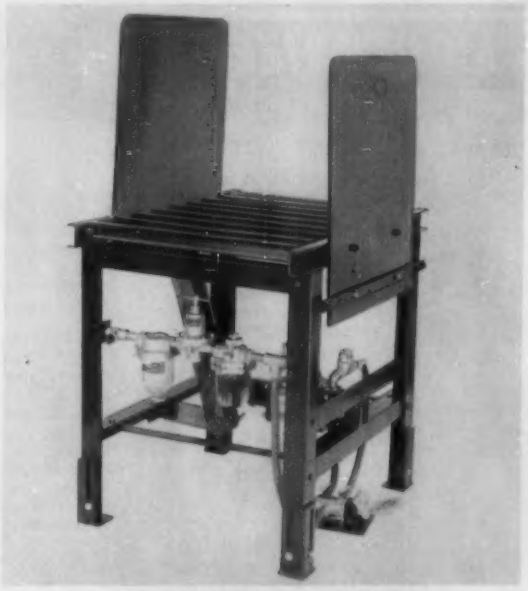

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# U. S. patents digest

Paper Co., Birmingham, Ala.). U.S. 2,777,629, Jan. 15. In a cardboard container including a lower rectangular box portion and an upper cover portion hinged along the upper edge of one side of the box portion.

**Paperboard Shipping Crate and Interlocked Crate Unit,** W. B. Crane (to Allied Plastics Co., Los Angeles, Calif.). U.S. 2,777,627, Jan. 15. A paperboard crate for the shipment of produce and the like comprising a bottom forming member, upstanding side-wall panels integrally connected by creases to said bottom forming member and end-wall structures connected to said side-wall panels and to said bottom member.

**Flexible Container,** A. F. Moberger, Melrose, Mass. U.S. 2,777,630, Jan. 15. A container made of resilient material comprising in detachable and cooperable combination, a body and a cover; said cover fitting over and enclosing the rim of said body.

**Weighing System,** R. L. Merrill and T. M. Boland (by mesne assignments to The Battelle Development Corp., Franklin, Ohio). U.S. 2,777,661, Jan. 15. An apparatus for filling containers with a predetermined weight of a fluid comprising a weigh chamber, a servo-controlled flow valve for directing a flow of fluid into said chamber.

**Molded Plastic Container,** H. M. Kikuchi, Cleveland, Ohio. U.S. 2,777,492, Jan. 15. A molded flexible plastic pouch having a tray portion integral therewith adapted to project outwardly from mouth of said pouch and comprising an extension of one side of pouch.

**Carton Forming and Conveying Mechanism,** A. T. Lubersky (to Fibreboard Products, Inc., San Francisco, Calif.). U.S. 2,777,563, Jan. 15. A conveyor for cartons or the like which comprises a track upon which cartons may slide, two receiving stations spaced on said track for simultaneous reception of two cartons.

**Apparatus for Curling Containers,** G. A. Moore, New York, N. Y. U.S. 2,778,287, Jan. 22. Apparatus for curling conically shaped containers which includes a curling die comprising a central truncated body having four adjacent sloping sides to coincide with the angle of taper of the container side wall.

**Package for Beverage Infusion Material,** J. J. Rodth (by mesne assignments to Sealpak Corp., New York, N. Y.). U.S. 2,778,739, Jan. 22. A hermetically sealed package of liquid soluble food material to be extracted by infusion comprising a generally cup-shaped body having an annular flange at upper edge of side wall thereof.

**Conveyor Apparatus,** W. E. Milligan, Quincy, Mass. U.S. 2,778,475, Jan. 22. Conveyor apparatus comprising a rotable shaft having a free end and adapted to be mounted sloping downward from the horizontal toward said free end.

**Packaging With Molded Pulp Cushioning Pads,** R. L. Emery, Fairfield, Me. U.S. 2,778,490, Jan. 22. A packing device comprising a molded pulp sheet having alternate rows of recesses and ribs on each surface thereof whereby the recesses on one surface form the ribs on the opposite surface and the ribs on said one surface form the recesses on the opposite surface.

**Cap and Advertising Insert,** J. W. McFarlane (to Ball Bros. Co., Muncie, Ind.). U.S. 2,778,519, Jan. 22. In a closure for containers, a rigid closure member having a continuous depending flange formed thereon for encircling and engaging the neck portion of a container, a ring-shaped gasket fitted within said flange, its outer edge portion in frictional engagement with said flange.

**Bottle Cap,** R. C. Hyde, Jr., Livonia, Mich. U.S. 2,778,520, Jan. 22. A bottle cap including a top, a semi-circular tongue partly severed from the top along an arcuate line to form a relatively narrow arcuate flange at the adjacent perimeter of the top.

**Collapsible Crate,** James Finis Dedmon, Milan, Tenn. U.S. 2,778,523, Jan. 22. A collapsible wirebound tubular crate comprising a plurality of spaced-apart, hingedly connected side-wall members, each side-wall member having inner vertical slats arranged adjacent to the sides thereof.

**Bottle Crate and Cell Unit Therefor,** E. H. Bock (to Wheeling Steel Corp., Wheeling, W. Va.). U.S. 2,778,524, Jan. 22. A bottle crate having a bottom of expanded metal, a metal top with bottle openings therein and bottle cells of expanded metal extending between the top and bottom, respectively, in vertical alignment with bottle openings in top.

**Container,** H. B. Lermer, (to Lermer Plastic Mfg. Co., Garwood, N.J.). U.S. 2,778,525, Jan. 22. A container comprising a body portion open at its upper end, a rib formed on the outer wall of the body portion and projecting therefrom adjacent upper edge of body.

**Partition Structure for Compartmented Cartons,** H. W. Forrer (to Atlanta Paper Co., Atlanta, Ga.). U.S. 2,778,526, Jan. 22. A collapsible compartmented carton for carrying bottles and other similar articles, said carton comprising a medially foldable bottom wall.

**Combined Flexible-Walled Bag and Pouring Spout,** M. H. Klausmann (to Seal-Spout Corp., Newark, N.J.). U.S. 2,778,546, Jan. 22. A new article of manufacture comprising a bag whose walls are formed of thin, flexible and tearable material that is inherently incapable of supporting a metallic pouring spout and of resisting tearing incident to opening and closing of spout.

**Unitary Container,** G. A. Moore, New York, N.Y. U.S. 2,778,557, Jan. 22. A container of sheet material comprising side walls folded and being arranged in

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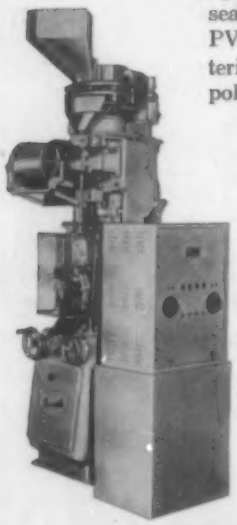

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## U.S. patents digest

opposing pairs and having a flat bottom end wall integrally related with said side walls.

**Blank for Packaging of Books and the Like,** A. C. Boitel (to Atlas-Boxmakers, Inc., Chicago, Ill.). U.S. 2,778,559, Jan. 22. A blank for a book wrap or the like comprising a generally rectangular sheet of corrugated paperboard whose corrugations run parallel to the long dimension thereof.

**Method of Packaging Hosiery,** J. W. Malley (by mesne assignments to S. D. Arrowood & Co., Inc., New York, N.Y.). U.S. 2,778,172, Jan. 22. In a method of packaging hosiery, the steps of laying a pair of stockings flat on a surface with the heels thereof located at a heel mark on said surface and with the tops thereof extending toward a second mark on the surface spaced from said heel mark by a known distance.

**Conveying and Transporting Mechanism for Elongated Articles,** H. E. Engleson and E. D. Sramek (to F. B. Redington Co., Chicago, Ill.). U.S. 2,778,476, Jan. 22. In a machine for packaging elongated articles, apparatus for placing said articles into a conveyor bucket, said apparatus comprising a plurality of parallel, movable dividing partitions for holding articles mutually parallel.

**Can Carrier and Blank Thereof,** F. A. Chidsey, Jr. (to Container Corp. of America, Chicago, Ill.). U.S. 2,779,499, Jan. 29. In a paperboard can carrier for two rows of chime-end cans comprising an open-end tubular structure including a top wall.

**Ampoule Filling Device,** L. P. Gajda (to Arthur Colton Co., Detroit, Mich.). U.S. 2,779,506, Jan. 29. In a device of the type used for filling ampoules and bottles in measured quantity having a valve for alternately receiving and discharging material.

**Multi-Unit Container,** C. W. Vogt, Norwalk, Conn. U.S. 2,779,526, Jan. 29. A container for a plurality of articles comprising a bottom, side, members hinged to the opposed sides of the bottom, end members hinged to the opposed sides of the bottom between the side members.

**Battery Shipping Container,** C. D. Fallert (by mesne assignment to Crown Zellerbach Corp., San Francisco, Calif.). U.S. 2,779,527, Jan. 29. A one-piece, open-bottom corrugated paperboard container adapted to enclose an electric storage battery having fragile upstanding projections extending above the battery case.

**Article-Manipulating Apparatus for Packaging Machines,** R. E. Lippert and E. J. Raut (to The Andrew Jergens Co., Cincinnati, Ohio). U.S. 2,779,453, Jan. 29. Apparatus for manipulating articles during wrapping of the same, an article conveyor having a surface for supporting and advancing the articles, a second conveyor having a run generally in longitudinal alignment with said article conveyor.

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## EQUIPMENT • SUPPLIES • SERVICES

**LITHOGRAPHED METAL CONTAINERS.** 16-page brochure presents illustrations and description of company's metal container service. Includes design, artwork, lithographing, and fabricating of such container types as round, oval, single-friction, suitable for food, medicinals, chemicals. J. L. Clark Manufacturing Co. (D-751)

**ADHESIVES, COATINGS, SEALANTS.** 8-page illustrated brochure describes Massachusetts company's facilities for custom formulation of adhesives, coatings, and sealants. Includes two-page chart listing principal uses, characteristics, and properties of typical adhesives formulated by company. Angier Adhesives. (D-752)

**POLYETHYLENE FILM SAMPLE.** Literature describing company's new grade of polyethylene flat and gusseted tubing is enclosed in a bag made from the material. Said to have high clarity, strength, and slip qualities. Plastic Horizons, Inc. (D-753)

**STATIC NEUTRALIZER MANUAL.** 8-page illustrated manual discusses the various methods employed to neutralize static electricity on sheeting and film. Describes the "magic wand" neutralizing technique with diagrams and installation data. Herman H. Sticht Co., Inc. (D-754)

**AUTOMATIC CAPPERS.** Illustrated folder gives specifications for line of rotary single and multi-spindle cappers with capacities of 40 to 200 caps a minute. Suitable for glass and metal containers. Consolidated Packaging Machinery Corp. (D-755)

**"POLY ON MYLAR" SAMPLE.** Literature describing characteristics of company's polyethylene-cellophane extrusion-laminate and "poly on Mylar" extrusion-laminate in several grades is enclosed in a sample bag of "P.O.M." film. Includes yield charts, price list. Print-A-Tube Co. (D-756)

**GIFT WRAP CATALOG.** 12-page catalog illustrates and describes multi-color wraps in many patterns and designs, and heavy kraft for outside wrapping. Includes sample swatches of wraps printed with metallic ink. Ben-Mont Papers, Inc. (D-757)

**HEAT-SEALABLE FILM.** Illustrated folder describes applications for heat-sealable polyester films for packaging products ranging from food to metal parts. Includes properties chart. Minnesota Mining & Manufacturing Co. (D-758)

**TEXTILE BAGGING MACHINE.** Illustrated folder describes line of hand-fed machines that speed bagging of textile products. Designed for use with plastic or paper bags. Tele-Sonic Packaging Corp. (D-759)

**MULTI-COLOR FLEXOGRAPHIC PRESS.** Literature lists specifications for flexographic press designed for printing, tinting and coating film, foil and paper stocks. Press provides work speeds up to 600 feet per minute. Manhasset Machine Co. (D-760)

**CORRUGATED GIFT CONTAINERS.** 8-page illustrated folder describes Illinois company's package design service for creating gift packages and illustrates several corrugated containers that have been printed by company. Stone Container Corp. (D-761)

**PACKAGING DISPLAYS.** Illustrated booklet discusses factors involved in the successful selection of corrugated point-of-purchase packaging displays. Also illustrates typical uses of these displays. Hinde & Dauch. (D-762)

**SOLVENT FOR GUMMED TAPE AND GLUE.** Literature describes "Stik-Gum," a chemical compound to be mixed with water and used in sealing machines for moistening water soluble adhesive surfaces of gummed tape, labels, and envelopes. Said to eliminate curling and foul odors in sealing operations. Service Industries. (D-763)

**PROTECTIVE PACKAGING MATERIAL.** Illustrated folder describes "Packit," a cotton wadding suitable for cushioning, surface protection. Available in sheets, rolls, or fabricated for specific use. The Stearns & Foster Co. (D-764)

**CAN MAKING MACHINERY.** File folder contains illustrated bulletins giving detailed specifications and descriptions of line of can manufacturing machinery. Line includes slitter, end curlers, strip feed press, scroll shear, air testers, beading machines, flanging machines, and a body maker and soldering machine. Baldwin-Lima-Hamilton. (D-765)

**VARIABLE DATA LABEL PRINTER.** Literature describes machine that uses either stencils or rubber plates to print product identification labels, including those with variable data such as part numbers, codes, sizes, dates. Weber Marking Systems. (D-766)

**INDUSTRIAL SCALES CATALOG.** Illustrated folder describes and lists capacities for extensive line of industrial scales, including floor, overhead track, hopper, counting, bench and portable types. Toledo Scale Company. (D-767)

**PHOTOELECTRIC CONTROL.** Literature describes photoelectric control unit for such packaging line operations as inspection, counting, filling. Unit can follow operations up to 600 a minute. Includes price list for several models. Standard Instrument Corp., Division Heat-Timer Corp. (D-768)

**DOUBLE-COATED TAPE.** Illustrated folder describes pressure-sensitive cloth and paper tape coated on both sides with adhesive for holding, bonding, and splicing applications. Dutch Brand Div., Johns-Manville. (D-769)

**WEIGHING MACHINES FOR PACKAGING.** 4-page folder describes line of automatic net weighing machines with hopper capacities from 50 to 1,000 cu. in., and scale capacities from 8 oz. to 100 lb. Includes specifications. The Exact Weight Scale Co. (D-770)

**BAG CLOSING MACHINE.** Illustrated folder describes operating features of machine that glues or steel-ties paper bags at speeds up to 32 a minute. Shellmar-Betner Div., Continental Can Co. (D-771)

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**WIRE-BOUND SHIPPING CRATES.** 16-page brochure describes construction principles of wire-bound wood boxes and crates used for materials handling. Wirebound Box Manufacturers Assoc. (D-772)

**CODER-DATER FOR CONTAINERS.** Literature describes automatic machine that codes, dates, marks prices, and prints names on all kinds of containers. Acro Tool & Die Works. (D-773)

**PLASTIC FILM SHEETER AND BAG MAKER.** Illustrated literature describes combination sheeter and/or bag maker. As a sheeter, machine accommodates rolls up to 24 in. wide. Can make polyethylene bags in a variety of lengths and widths. Lectromatic Devices, Inc. (D-774)

**SINGLE-PORTION PACKETS.** Illustrated folder describes machine that forms, fills and closes packets made of foil, paper, cellophane, or polyethylene laminates used for packaging free-flowing powders such as sugar, flavored drink powders. Brown Bag-Filling Machine Co., Inc. (D-775)

**LETTERPRESS FOR PRINTING BOXBOARD.** Folder illustrates features and gives specifications for line of 2-, 3-, and 5-color sheet-fed rotary letterpresses. Presses handle sheets from 5,000 to 6,500 sheets an hour. The Cottrell Co. (D-776)

**FILLER FOR VISCOUS, SEMI-SOLID PRODUCTS.** Illustrated 12-page brochure describes method of operation, principal features, and includes specifications and dimensions for line of rotary piston fillers suitable for filling glass or tin containers of 1 oz. to 1 gal. capacities. The Pfaudler Co. (D-777)

**AEROSOL VALVES.** Illustrated folder describes line of aerosol valves available with five actuator types for various dispensing functions. Includes diagram of design features. The Risdon Manufacturing Co. (D-778)

**PLASTIC COATING FOR PACKAGING.** Illustrated booklet contains case-history discussions of company's polyvinyl chloride latices used as coatings for fibre drums, cardboard containers, and tape. B. F. Goodrich Chemical Co. (D-779)

**TRANSPARENT SHEET.** Illustrated folder describes company's cellulose acetate, cellulose acetate butyrate, cellulose triacetate transparent sheet for containers, envelopes, boxes, lamination, display items. Contains detailed specifications chart. Eastman Kodak Co., Cellulose Products Div. (D-780)

**STATIC ELIMINATOR.** Folder uses cartoon approach to describe company's static eliminator that consists of a power unit and one or more static bars. Illustrates uses in converting, packaging, and printing applications. The Simco Co. (D-781)

**TISSUE PAPER SAMPLES.** Folder contains sample sheets of company's lint-free tissue paper in several colors. Rondout Paper Mills Sales Corp. (D-782)

**MULTI-UNIT PACKAGING MACHINE.** Folder describes and illustrates sequence of operation of a small-size automatic machine that sets up and fills multi-unit cartons with any size can in single or double line arrangements for 2 to 6 units a carton at speeds up to 240 cans a minute for a 6-pack. Cluster-Pak Div., Atlanta Paper Co. (D-783)

**FOLDERS FOR PACKAGING TEXTILES.** Illustrated literature describes tuck-in paper folders available embossed or printed for packaging such items as ties, ladies gloves, socks, shirts, handkerchiefs. Campbell Box & Tag Co. (D-784)

**COATINGS FOR PAPER.** File folder contains samples of paper treated with company's plastic coating, varnish, lacquer. Perfect Finishing Co., Inc. (D-785)

**INTERIOR PACKAGING MATERIAL.** Folder illustrates "Pillo-pak," a packaging material that resembles corrugated paper, but has solid pulp-filled fluting. Illustrates typical applications. Packaging Materials Corp. (D-786)

**BOX COVERING PAPER SAMPLES.** Sample folder contains swatches of company's wood-grain printed paper for use in covering boxes, available in 26, 28¾, and 30 in. rolls. Charles W. Williams & Co., Inc. (D-787)

**CAPPING MACHINERY.** Folder illustrates and describes line of automatic and semi-automatic screw cappers and can sealers. Cappers with speeds up to 200 a minute included in line. Resina Automatic Machinery Co., Inc. (D-788)

**PARTITION MACHINE.** Literature shows automatic adjustable partition machine that forms and assembles partitions from paper stock. Operates at speeds up to 150 tucks per minute. Inman Manufacturing Co. (D-789)

**ADHESIVES.** Literature describes service and facilities of company that produces liquid and dry adhesives, and flexible glues for all types of hand or machine operations. Manhattan Paste & Glue Co., Inc. (D-790)

**LIQUID FILLING MACHINES.** Illustrated catalog describes line of automatic and semi-automatic liquid filling machines, including gravity, vacuum and volumetric models to fill all container types with a wide variety of liquid products. MRM Co., Inc. (D-791)

**GUIDING PLASTIC WEBS.** Application bulletin describes five models of edge position control devices for use in printing, embossing, slitting and re-winding plastic film webs of all gages, moving at all speeds. Askania Regulator Co. (D-792)

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## Folding boxes—supplier industry survey

[*Continued from page 100*]

Half a dozen brands are already in the flip-top box today—Marlboro, Parliament, Spuds, Philip Morris, Encore and L & M—with three others reportedly being market tested. FPBA says that the flip-top box has been a major factor in a $700,000 per month increase in cartons produced for the tobacco industry. Another big factor has been the wide acceptance of the five-pack carton for cigars.

Use of cartons for paper products —napkins, cups and towels—has doubled since 1950, representing a $75-million volume in 1956, which is a $13-million increase over the preceding year.

### DEVELOPMENTS

Improvements in folding-box manufacture have been evolutionary, rather than revolutionary, to meet user demand for continually better quality.

Automatic cartoning machinery requires precision-made cartons, held to the closest dimensional tolerances. With cartoning speeds of 300 per minute not uncommon in the soap field and carrier-cartoning machines now in use that will handle up to 900 cans per minute, uniformity is imperative to assure smooth operating efficiency.

Aids to this greater efficiency are innovations, such as the Lord Baltimore Press "Unituck" system for the standardization of tucks and flaps on cartons destined for high-speed cartoning operations.[1]

Spectacular advances have been made in fine-screen, full-color printing on folding boxes—improvements achieved through better board quality, improved printing surfaces and inks. Process color work on a folding carton today rivals the finest magazine printing, using letterpress, offset lithography and gravure processes. Offset plates up to 175-screen are commonly used to reproduce the mouth-watering food illustrations on cartons that line the shelves of today's supermarkets.

Other achievements include the development of window boxes, which show contents of the package through a transparent window. FPBA estimates that two out of five cartons used today are window cartons—with or without film.

Other aids that have greatly increased the acceptance of the folding box are the many convenient opening and dispensing devices, such as the pouring spouts, opening tabs and even a tear strip, such as has been incorporated into the General Mills cereal packages.[2]

Folding-box makers see constantly growing new markets for their products as the result of steadily improved manufacturing techniques, ingenious constructions and more effective printing and design.

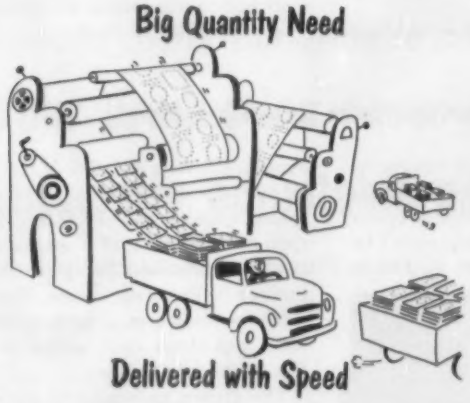
One of the strong trends is increased packaging in cartons for self-selection merchandising in department stores.

Among specific things to be expected are:

► Still better printing surfaces for

[1]See "Standardizing Tucks and Flaps," Modern Packaging, April, 1956, p. 92.

[2]See "Pull-Tab Cereals," Modern Packaging, Jan., 1956, p. 93.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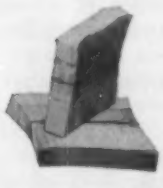

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MARKED IMPROVEMENTS in
IDENTIFICATION
AND DECORATION

**A voice from the shelf**... that says "Here's the paint ... drug ... oil ... you're looking for ..." would certainly help both buyer and seller. Attractively lithographed cans do "talk" this way, but one trouble has been high production runs of lithographed cans vs. the short run needs of variables such as color names, batch numbers and date codes. Markem suggested imprinting the variables on partially lithographed cans, as they are needed, and built the 70AF machine to do the job. Today a fair number are in use, imprinting little 1/32 to full gallon sizes, areas to 2" x 6", at rates up to 1500 an hour (an even faster rotary machine is underway). Beats torn, smudged or missing paper labels all hollow.

**"Elephant trunk" marker** ... is not the usual way Markem describes its machines, but for the 89A, the nickname has stuck. This is a typical Markem "Special Products" development, for marking tradename and size on tubular rubber insulation. The inelegant nickname originated because the material is a six foot length of gray tube 1¼" to 5" in diameter. It is fed into the machine, passes under the printing head and ejected by a lower drive roll. Adjustments for different diameters are easily made, and other useful features include mobility for use in different locations, variable speed motor, excellent imprint quality with Markem's jasmine yellow marking compound. The people who worked out this "Special" perhaps can help you, if you have a yet-unanswered problem in identification/decoration marking.

**"Do-it yourself"** ... is often prompted by economy reasons. In marking products, however, the manufacturer who "does it himself" not only saves money, but also gets what he wants when he wants it. Here's what we mean: a company making plastic cases for eyeglass lens cleaner had the product name and directions imprinted on the containers by a job printer. The method was neither convenient or economical. The local Markem man presented a case for the 20A machine, and it gave a good account of itself in an 80-prints-per-minute run. Having another satisfied customer makes us happy, and he's tickled with the quality, convenience, and prospect of the 20A paying for itself in six months.

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► Improved greaseproof, insect-proof, rancidity-proof carton stocks.

► Carton packages for battery acids and soft drinks.

► New combinations of pulps and chemicals that are expected to provide stronger, more serviceable cartons.

Pricewise, it is predicted folding boxes will trend upward, in the near future and in the long run. The trend is toward upgrading for better quality through the use of sturdier construction, stronger board, more colors and added protective features —all of which add to production costs.

Other factors that add to costs are:

1. The demand for precision boxes for automatic carton handling, which requires more care and higher-skilled labor in production.

2. Higher labor costs. In 1951 the ratio of labor to total folding-box manufacturing cost was 16.2% of the total, FPBA reports. In 1956 it was more than 20%.

3. Higher machinery costs. New machines to replace old equipment run up to three and four times as much as older presses. Presses that cost $250,000 are not uncommon today—a price that was unheard of before World War II.

4. Higher material costs for board, ink, glue, varnish, film, etc.

5. Need for a higher profit margin to attract capital for expansion. In 1951 profits in this industry, after taxes, were 5.06% of sales; in 1954 they were down to 2.89%, up to 3.25% in 1955 and about the same in 1956, although figures are not yet all in.

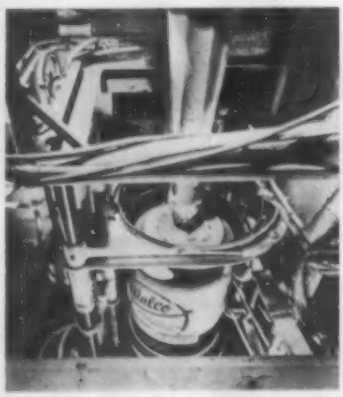
Despite increasing prices, however, the industry feels that the folding carton still continues to be the most economical of all major package forms.

Dividing the industry's 1956 unit production into dollar sales, indicating an average carton cost of less than 8/10 of a cent, would seem to support this view.

For most products, the folding carton is still such a small item in relation to final costs that most manufacturers will not hesitate to spend an extra penny for a carton that can save in the cost of handling, stimulate the multiple sale, upgrade a product to win greater acceptance —or perhaps do all three.

## New method for uniform drum coating

An automatic technique for applying drum-liner coatings designed to overcome the irregularities of spray-gun methods has been announced by Rheem Mfg. Co., 7600 S. Kedzie



Ave., Chicago. Reportedly, the new method will produce coatings varying only 0.0001 in. in thickness.

Centrifugal force is employed to spread the coating evenly as a dynamically mounted disk is moved in and out of the drum at a set speed. Spinning at more than 3,600 rpm, the disk casts off a continuous curtain of atomized lining material through a fine-mesh screen. Drum shells are baked in a vertical position, each drum shell acting as a flue in the heating oven.

The greater uniformity of coating thickness is attributed to (1) centrifugal application of coating at a set distance from the drum shell, (2) coating with drum shell stationary, (3) elimination of the human element, (4) absence of turbulence from injected or exhaust air and (5) reduction of solvent needed for this coating process. The vertical baking set-up is said to provide greater temperature control, helping to eliminate uneven spots.

Steel drums of 22½-, 18¼- and 13$^{15}$⁄$_{16}$-in. diameters are available with centrifugally applied interior coatings, the company reports.

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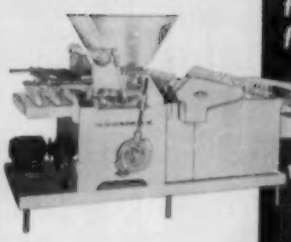

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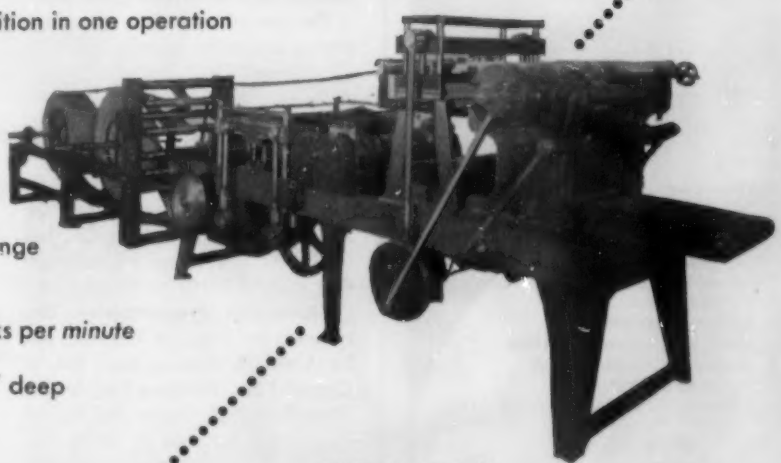

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## New slide top box for cigarettes

Latest idea to enter the arena of competitive cigarette packaging is a new folding box with sliding top announced under the joint sponsorship of Pull-Packaging International, Inc., which engineered it; American Machine & Foundry Co., suppliers of the packaging machinery, and Container Corp. of America and U.S. Printing & Lithograph Co., the first two licensed suppliers of the blanks.

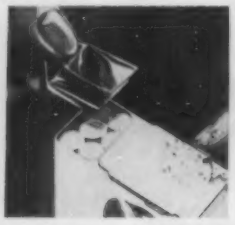
Designed by Bernard J. Tamarin, inventor of the Philip Morris Snap-Open soft pack, the "Slide-Top" box is a one-piece blank. It functions by means of twin tabs held between thumb and forefinger which open the slide panel and pop up one corner of the foil liner for tear off. A tap on the top of the box causes the "cigarettes actually to rise from the box."

The sponsors say the package uses 25% less paperboard than hinged-lid hard boxes, but is twice as rigid. They are counting on novelty and trim appearance to attract initial commercial application.

The ease with which it opens, dispenses cigarettes without jamming and prevents sifting in pocket or purse are expected to make it appealing to cigarette smokers.

Protective features pointed out are: a tight closure, sides intact with no split panels and foil inner wrapping completely locked four ways with the box.

**Twin tabs** release slide panel of package.



**Foil pops up** for easy tearing off.

**Tap on top** makes the cigarettes rise.

The makers claim 75% greater protection against moisture loss than other hard boxes because only five cigarettes are exposed when the Slide-Top is open. They say it assures delivery of 20 perfectly rounded cigarettes because it uses the same packaging arrangement used in conventional soft packages.

It should be attractive to tobacco firms because the same 3-79 cigarette packers made by AMF, now used for producing the traditional soft-pouch package, can be converted to turn out the Slide-Top at the same production rate.

To adapt the machine to the new packages it is necessary to replace only the present paper-label feed with a simplified hard-box attachment made by AMF. Either coated newsback or white sulphate stock may be used.

## 1957 Folding Box Awards

[*Continued from page 130*]

Co. Spice of Life Extracts family for McLaughlin Gormley King Co., box by The U. S. Printing & Lithograph Co.

**Superiority of construction.** Berry boxes for Pomeroy Mfg. Co., box by American Folding Box, Div. of Central Fibre Products Co., Saxony Powerflow Hair Dryer for Saxony Electronics, Inc., box by Berles Carton Co., Inc. Aladdin Vacuum Bottle Replacement Filler for Aladdin Industries, Inc., box by The Bradley & Gilbert Co. Virginia Dare Bar-B-Q Saucery kit for Virginia Dare Extract Co., Inc., box by Coates Board & Carton Co., Inc. Tcehnicolor for Technicolor Motion Pictures, Inc., box by Eureka Paper Box Co., Inc. Gevral promotional item for Lederle Laboratories, Div. of American Cyanamid Co., box by William W. Fitzhugh, Inc. Early Bird Feeder for The Early & Daniel Co., Inc., box by The Gardner Board & Carton Co. Mulsavite display for Merck, Sharp & Dohme, box by Edwin J. Schoettle Co., Inc. Old Fitzgerald Twin Candles for Victrylite Candle Co., box by John

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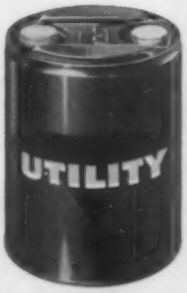


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**Best example of potential new volume use for products of the folding paper box industry.** Bibb Lettuce for J. H. Davis Co., box by American Box Board Co. Early Bird Feeder for the Early & Daniel Co., Inc., box by The Gardner Board & Carton Co.

**General superiority according to end use.** *Medicinal Products:* Dayamineral for Abbott Laboratories, box by Acme Paper Box Co. Thephorin AC display for Hoffman-La-Roche, box by E. J. Trum, Inc.

*Cosmetics and Personal Accessories:* Hand-Lo for Beauty Counselors, Inc., box by F. N. Burt Co., Inc. Mr. Stopette Spray Deodorant for Helene Curtis Industries, Inc., box by Green Bay Box Co. Avon soap family for Avon Products, Inc., box by The Lord Baltimore Press, Inc. Tek Denture Brush display for Tek Hughes, box by Sample-Durick Co., Inc. Stripe tooth paste for Lever Bros. Co., box by Shuttleworth Carton Co.

*Soap:* Lifebuoy soap for Lever Bros. Co., box by Fort Orange Paper Co.

*Food:* Pillsbury Mills Mixes family for Pillsbury Mills, Inc., box by Ace Folding Box Corp. Cheerios for General Mills, Inc., box by Chicago Carton Co. Salada Tea for the Salada Tea Co., Inc., box by National Folding Box Co. Div., Federal Paper Board Co., Inc. Dixie Fry for Prepared Products Co., Inc., box by Fleishhacker Paper Box Co. Zips crackers for The Kroger Co., box by The Gardner Board & Carton Co. Cheerios for General Mills, Inc., box by the Ohio Boxboard Co. Spice of Life Extracts family for the McLaughlin Gormley King Co., by The U. S. Printing & Lithographing Co. Lipton Chicken Noodle Soup for Thomas J. Lipton, Inc., box by Universal Folding Box Co., Inc. Cheerios for General Mills, Inc., box by Waldorf Paper Products Co.

*Bakery Products:* Van de Kamp's Fruit Cake for Van de Kamp's Bakeries, box by Container Corp. of America.

[*Continued on page 200*]


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[*Continued from page 199*]

*Confections:* No merit awards given in this category.

*Tobacco and related products:* No merit awards given in this category.

*Hardware, Appliances, Automotive Supplies:* York Line bathroom accessories for Gerity-Michigan Corp., box by Continental Can Co., Inc., Robert Gair Div. Shelby hardware products for the Shelby Spring Hinge Co., box by Continental Can Co., Inc., Robert Gair Div. Sun Ray steel wool for Williams Co., box by Empire Box Div., Ohio Boxboard Co. Gary Industrial Fasteners family for Gary Screw & Bolt Div., Pittsburgh Screw & Bolt Corp., box by Gardner Board & Carton Co. Alcoa aluminum nails family for Aluminum Co. of America, box by Gardner Board & Carton Co.

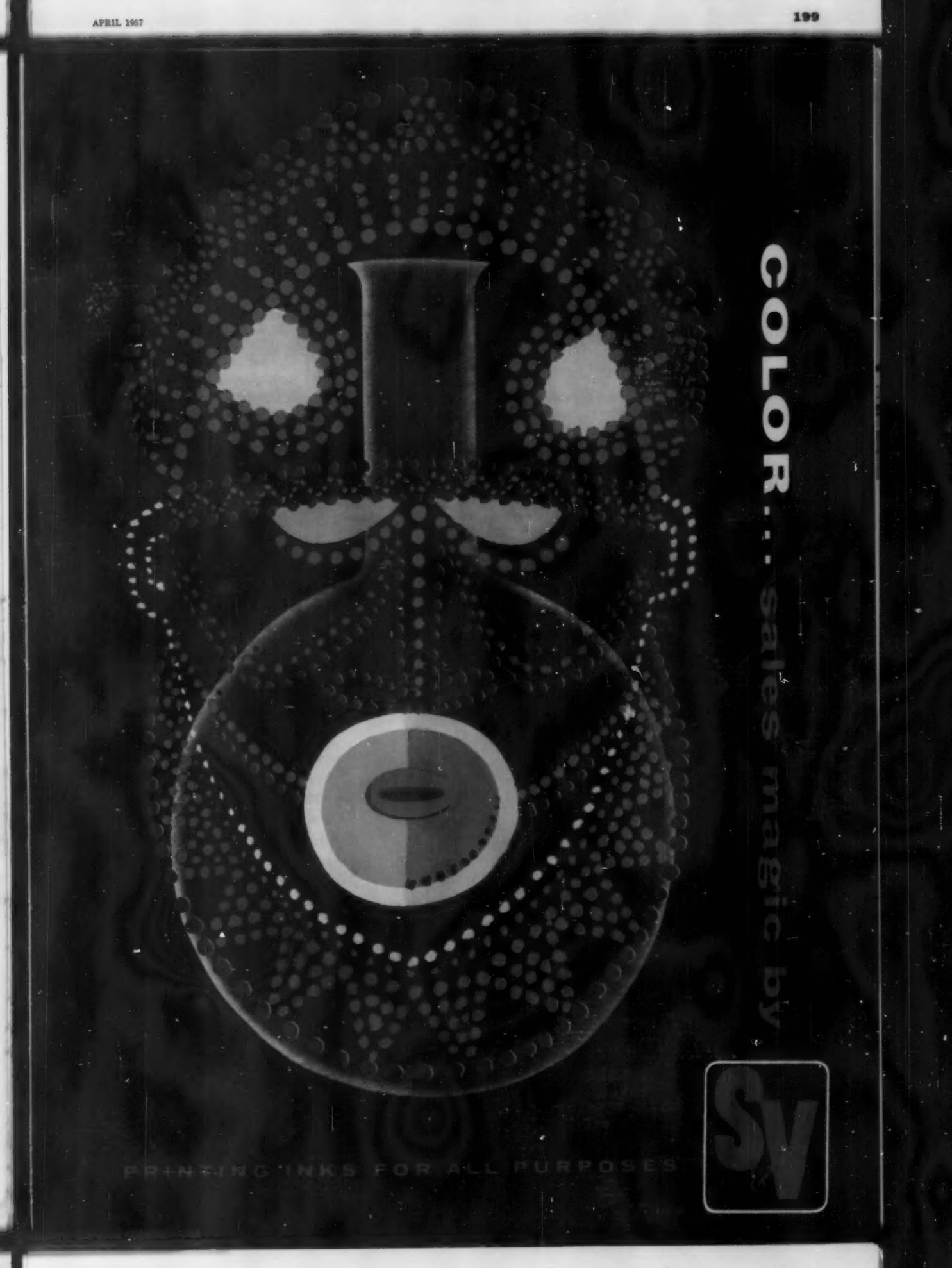
*Textiles and Wearing Apparel:* Formfit brassieres and girdles for the Formfit Co., box by Ace Carton Corp. St. Mary's blanket for St. Mary's Woolen Mfg. Co., box by Container Corp. of America. Jantzen International Set for Jantzen, Inc., box by The Gardner Board & Carton Co. Harmony House sheet and pillowcase ensemble for Sears, Roebuck & Co., box by Paper Package Co. Gilt Edge Gift Bath Set for Sears, Roebuck & Co., box by Paper Package Co.

*Retail Boxes:* Globe laundry box for Globe Laundry, box by The Flintkote Co.

*Beverages:* Manischewitz wine for Manischewitz Wine Co., box by Container Corp. of America. Cointreau liqueur for Renfield Importers, Ltd., box by The Lord Baltimore Press, Inc. Wolfschmidt's vodka for Wolfschmidt, Ltd., box by The U. S. Printing & Lithograph Co.

*Carriers:* Hoffman Sparkling Beverages for Hoffman Beverage Co., box by Coates Board & Carton Co., Inc. Liquid Trend for Purex Corp., Ltd., box by Container Corp. of America.

*Toys and Sporting Goods:* Spaulding golf balls family for A. G. Spaulding & Bros., Inc., box by Container Corp. of America. Andy Gard remote-control toys family for General Molds & Plastics Corp., box by National Folding Box Co. Div., Federal Paper Board Co., Inc. Slinky Bucko for James Industries, Inc., box by the Gardner Board & Carton Co. Balloon kits for The Pioneer Rubber Co., box by The Gardner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*Paper Goods Or Products:* Norse Craft Ornaments for Norse Craft, Inc., box by Continental Can Co., Inc., Robert Gair Div. Hudson Damask Dinner Napkins for Hudson Pulp & Paper Corp., box by The Lord Baltimore Press, Inc.

*Best Display Cartons:* Mail Pouch tobacco for The Bloch Bros. Tobacco Co., box by Carton Service, Inc. Flint stainless steel kitchen tools for Ekco Products Co., box by Container Corp. of America. Cutler Can Can Baby Pants for H. H. Cutler Co., box by Robert Gair Div., Continental Can Co., Inc. Ban lotion deodorant for Bristol-Myers Co., box by National Folding Box Co. Div., Federal Paper Board Co., Inc. Mulsavite for Merck, Sharp & Dohme, box by Edwin J. Schoettle Co., Inc. Medico pipes for S. M. Frank & Co., Inc., box by United Board & Carton Corp.

*Miscellaneous:* Mastercraft lawn seed family for Kahn Bros., box by Ace Carton Corp. Bird feeding cabin for Whitney Seed Co., Inc., box by F. N. Burt Co., Inc. Lifetime plastic fly swatters for Plaskolite, Inc., box by Columbus Paper Box Co., Inc. Paper Mate Capri display for The Paper Mate Co., box by Container Corp. of America.

### Competition judges

The four groups of judges for the 1957 competition were as follows:

*Printing:* George Jorgenson, Lithographic Foundation; Dewitt Patterson, Color Engravers Corp.; Gordon Martin, designer and typographer.

*Construction:* A. P. Bondurant, Glenmore Distilleries; Russell Spees, Wolverine Carton Co.; James Miller, folding-box salesman.

*New Use:* Ed Daleske, National Automatic Merchandising Assn.; Mel Brisk, *Food Topics*; Warren Drury, *Textile Reporter*.

*End Use:* John Willmarch, Earle Ludgin & Co.; Findley Williams, Sears, Roebuck & Co.; Jack Penson, Penson-Tuttle, Inc.; Louis Cheskin, Color Research Institute; Richard Hodgson, *Advertising Requirements*.


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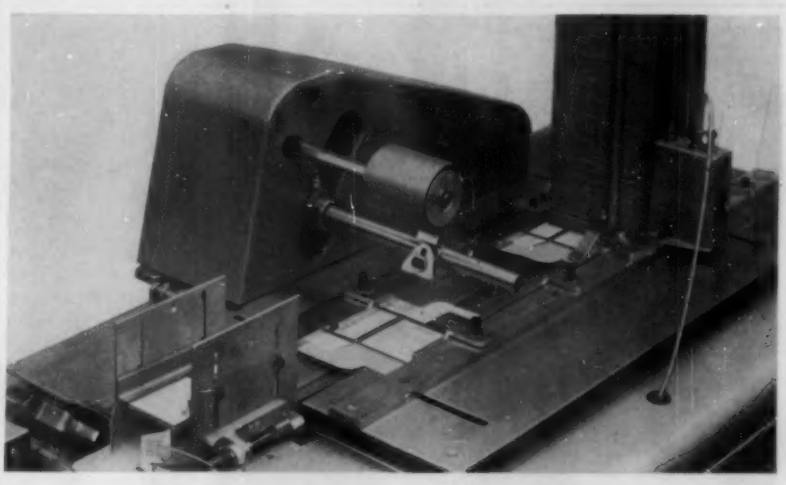

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## Poly extrusion coating

[*Continued from page 150*]

factory adhesion to the foil is maintained.

When an inert atmosphere such as nitrogen was used on the foil side, adhesion was completely prevented. This again emphasizes the important role of oxidation in obtaining adhesion to smooth surfaces such as foil. It also implies that an oxidizing treatment on the foil side might improve adhesion. It might be feasible to employ both treatments simultaneously. The auxiliary heaters previously mentioned could be used both to offset cooling and to promote adhesion.

### Summary

The numerous factors affecting the adhesion of polyethylene extrusion coatings were investigated with the following results:

*Factors which improved adhesion:*

1. High compound temperatures.
2. A high degree of substrate surface dryness (freedom from moisture, lubricants or powders).
3. Pre-heating of the substrate.
4. Processed polyethylene.
5. Slow quenching (warm chill roll).
6. Post heating of the coated substrate.

*Factors which adversely affected adhesion:*

1. Excessive amounts of anti-oxidant in resin.
2. High coating speeds and low coating weights (i.e., low compound temperature).

*Factors not affecting adhesion:*

1. Small amounts of anti-oxidant in the polyethylene.
2. Pressure changes of rubber back-up roll with non-resilient substrates.
3. Molecular weight of adjacent grades of polyethylene.

It was demonstrated also that adhesion of polyethylene to smooth substrates is primarily dependent on the degree of oxidation of the applied coating. Factors which promote oxidation of the polyethylene surface, such as increased compound temperature and exposure time, were found beneficial to adhesion. On the other hand, these same factors had the disadvantage of contributing to odor development and poor heat sealability after aging.

It was shown that adhesion to foil could be prevented entirely by excluding oxygen from the applied coating as it left the extruder. By applying this principle only to the outer polyethylene surface and promoting oxidation on the foil side of the coating, excellent adhesion could be obtained without the disadvantage of odor development and poor heat sealability after aging. Subsequent storage of the coated stock at low temperatures inhibits further oxidative breakdowns, maintaining minimum heat-seal temperatures.

### Recommendations

Based on the results of these studies and on information gathered from previous work, the following recommendations are made regarding the extrusion coating of polyethylene:

*For improved adhesion:*

1. Processed compounds such as Bakelite brand polyethylene DFD-3200 natural are preferred to resins such as DYNF, DYNH and DYND.
2. High (not maximum) compound temperatures in the range of

[*Continued on page 208*]

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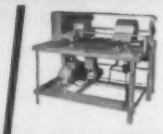
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*Strike the perfect balance between*

## *PROTECTION AND APPEARANCE!*

R.O. Seals have it both ways. They are practical, giving a perfect hermetic seal. They are handsome, with their colourful designs and superb finish. Every seal is tailor-made to suit the individual bottle or jar screw thread rolled by the R.O. sealing machine. Made in three types—with Plain skirt, with Pilferproof perforated security band or with the new SecuRo contra-thread security band. Whichever type you need for your containers, you can be sure that the R.O. is the most distinctive closure for any product.

METAL CLOSURES LTD · WEST BROMWICH · STAFFS

ENGLAND

# Ribfoil®

# CUPS

● Ribfoil Aluminum Cups, designed by G. L. Canfield, of Basca Manufacturing Company, declared the winner of "The PDC Aluminum Award" in the PACKAGE DESIGNERS COUNCIL'S PACKAGE DESIGN AWARDS COMPETITION.

*Ribfoil* Aluminum cups are the *newest* development in aluminum packaging . . . judged best in the PDC competition on four points: design, construction, merchandising effectiveness and consumer appeal. This sweepstakes winner has been a proven success since its introduction. At the retail level they have generated a sales success story that is phenomenal.

*Ribfoil* Aluminum cups are available in a rainbow array of glittering metallic colors. There's one to fit your product. Ribfoil cups can be made in the size you need; stock sizes are 4, 8, 12 and 16 oz.

*Ribfoil* Aluminum cups can be filled and capped on fully automatic high speed production machinery; or by semi-automatic, or hand filling and capping equipment. Your present machinery is probably adaptable to Ribfoil cups. Multi-color aluminum foil cover caps are available. Hermetic sealing and protective interior coating are optional features.

*You'll sell more with RIBFOIL . . . write, wire or call today for full information.*

## Basca Manufacturing Company

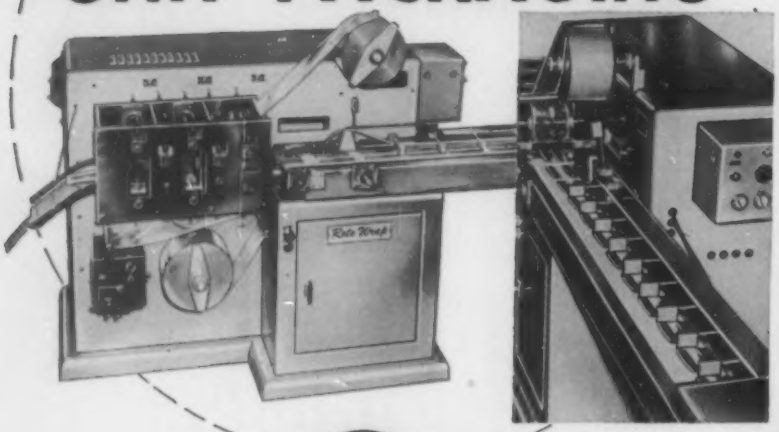
*Pioneers in Aluminum Packaging*

**2222 North Olney Street, Indianapolis 18, Indiana**

In Canada: *Cochrane Foilwares, Ltd., Rexdale, Ontario, Canada*

Ribfoil
...THE NEWEST DEVELOPMENT IN
ALUMINUM FOIL PACKAGING

DOUBLE SPEED
UNIT PACKAGING



WITH THE NEW Roto-WRAP TWIN RACK
MODEL 'B'

PRODUCES TWO PACKAGES
SIMULTANEOUSLY!

The new, wider Roto-Wrap "Twin-Track" Model 'B' makes available the merchandising benefits of unit packaging to all products from "balloons to bedsheets" through the obvious economy of automatic high speed operation. The design also features a top-loading conveyor offering unobstructed access for purposes of synchronizing "Twin-Track" function with automatic feeds or other conveyor-type operation.

The Roto-Wrap Model 'B' has earned esteem for its versatility in handling products of diverse shapes and sizes at high speed. **The "Twin-Track" Model 'B' adds range, speed and adaptability to that reputation!**

**The Perfect Machine for Packaging Soft Goods! — Requires No Stiffening Insert.**

**Simple and Complete Adjustability Within the Total Size Range.**

**Lightweight, Limp, Fragile and Irregular Objects Handled with Equal Facility.**

**Forms Packages from Two Webs. Can Use Different Materials in Combination for Purposes of Economy and Special Function.**

**Further Savings in The Use of Printed Materials is Accomplished By Using One Printed and One Unprinted Web.**

SEE IT IN OPERATION!
AT THE KNITTING ARTS EXPOSITION
Atlantic City, April 29-May 3rd
BOOTHS 601 and 602

Roto-WRAP

DIVISION
CONAPAC
CORPORATION
120 EAST 13th STREET, NEW YORK 3, N. Y.

[*Continued from page 204*]

500 to 550 deg. F. are recommended.

3. Highly annealed foils and similar grades of foils free from rolling lubricants are recommended for foil coating and the wettable or non-moistureproofed side of cellophane for cellophane coatings.

4. Pre-heating of the substrate is highly desirable if feasible.

5. Short (not minimum) draw-down distances and direct lead-in to the nip prevent premature cooling and improve oxidation adhesion.

6. The use of a warm chill roll prevents rapid quenching and aids adhesion.

7. Post heating of the polyethylene-coated substrate is desirable to upgrade initial bond.

*For improved heat sealing:*

1. The exclusion of air or oxygen from the free side of the coating as it leaves the die prevents over-oxidation of the surface and improves heat sealing. The use of an inert gas such as nitrogen is believed to be economically feasible.

2. Cold storage of the coated stock inhibits further oxidative breakdown, thus maintaining minimum sealing-temperature requirements.

### References

1. Arbit, H. A., TAPPI, *37*, No. 7: 162A-164A (July, 1954).

2. Griesser, E. E., and Arbit, H. A., preprint of paper to be published.

3. Intemann, H. K., *Paper, Film and Foil Converter*, *29*, No. 8: 21-23 (Aug., 1955).

4. Calsibet, R. A., *Paper, Film and Foil Converter*, *30*, No. 1: 32-34 (Jan., 1956).

5. Union Carbide & Carbon Corp., (Haine, W. A.), British pat., 728,203 (Aug. 13, 1953).

6. Myers, C. S., *Ind. Eng. Chem.*, *44*, 1095-1098 (May, 1952).

## Metal can production

Last year's production of metal cans rose to a record 41.8 billion units, according to an American Can Co. report. This figure was substantially higher than previous estimates and represents a 1956 industry-wide production 6.7% greater than that of 1955.

Present indications are that 1957 production will better the volume reached last year, according to a Canco company spokesman.

# STEIGERWALD

# SENSI-STICK

## LABELS

### Pressure Sensitive

NO WATER!

NO GLUE!

Easy as 1, 2 to Apply!

STICK TIGHT!

PERMANENT OR REMOVABLE

NO CLEANUP!

Labelsmiths

Phone . . . Wire . . . or Write Today!

### Easy to Apply . . . Sure to Stick!

Gone is the glue pot! Gone is water! Steigerwald Sensi-Stick pressure sensitive labels eliminate forever old-fashioned start-up and clean-up labeling machine jobs.

Sensi-Stick simplifies labeling to a 1, 2—pick and stick quick way—Individual labels or Dispenser automatically feeds individual labels on a tape ready for rapid application.

### Economical—Faster Better for all surfaces

Steigerwald Sensi-Stick labels hold securely on all surfaces —won't buckle, curl or rub off even where others fail and nothing else will hold—choice of permanent or easy-to-take-off, surface safe adhesives.

### Beautiful designs

Reproduce your present label just as it is on Sensi-Stick or consider a new design with a choice of gold or silver foil; embossed; lustrous papers and sparkling inks to add an extra note of quality to your product. Use Sensi-Stick to show you the way to the world's fastest hand labeling operation.

CINCINNATI, OHIO
A. C. Stollmaier
Stollmaier & Son, Inc.
Marjemont Center Bldg
BRandle 1-0222

CLEVELAND, OHIO
A. C. and J. S. Foster
310 Hippodrome Bldg
Cherry 1-2468

DETROIT, MICHIGAN
Harry W. Hogg
18450 Livernois Ave
University 2-2144

KANSAS CITY, MO
A. B. Mason
905 Jefferson St
Victor 2-6580

LOUISVILLE, KY.
Practical Products
Joe Hermann
319 W. Jefferson St
Walnut 1757

MEMPHIS, TENN
Edward Magnus
746 Alabama Ave
Jackson 6-7574

MILWAUKEE, WIS
H. C. Lackowski
8849 S. 76th Street
Garden 5-5850

MINNEAPOLIS, MINN
J. E. and J. L. Moor
3329 Dupont Ave., So
Taylor 4-5309

NEW YORK, N. Y.
John P. McLeod
420 West 118th St
Monument 2-0237

ST. LOUIS, MO
Marvin Yates Company
Clayton Forsyth Bldg
8230 Forsyth Ave.

TAMPA, FLORIDA
H. J. Blakeslee
P. O. Box 1851
Phone 8-20761

**A. M. STEIGERWALD CO.**

910 W. Van Buren Street

Chicago 7, Illinois

TAylor 9-5400

Canco company spokesman.

A PRODUCT WITH A BRIGHTENING FUTURE
A PACKAGE THAT SAYS "BUY ME"

and SEAL-SPOUT*

—the pouring spout with a merchandising punch. Packages with SEAL-SPOUTS are . . .

easier to open
easier to pour
easier to close
better to store

Housewives favor these conveniences. They mean less spillage in using or storing—a greater protection of food products from dampness and infestation.

Manufacturers, in addition to the ease of applying *Seal-Spouts* right in the assembly line, will profit from their high merchandising value.

T. M. Reg. U. S. Pat. Off.

SEAL SPOUT Corp.
MOUNTAINSIDE, NEW JERSEY.


## Plant tour

Forty-two leading package designers toured the 316,000-sq.-ft. plant of The Lord Baltimore Press in Baltimore, Md., on March 6. W. Taylor Bouchelle, vice president in charge of sales, described an entirely new method of high-speed packaging designed to cut per-unit costs by eliminating overwraps, inner wraps and other packaging; the company's Uni-Tuck system to create uniform tucks and flaps on all cartons, and the Fidel-I-Tone Process for ultra-fine screen color work. Gordon Dalsemer, vice president in charge of manufacturing, showed color slides of the plant layout and William B. Banks, vice president, stressed the many creative services offered by Lord Baltimore.

Special guides were assigned to the designers to show every phase of the company's operations, including the recently installed Champlain eight-color, 36-in. web-fed rotogravure press, which reportedly could print a ribbon of paper, cellophane or foil 3 ft. wide and long enough to reach from Baltimore to Wilmington, Del., in one 8-hr. shift.

## Twist-off cap favored

Nine out of 10 users of catsup favor the new twist-off cap, according to a coast-to-coast survey recently conducted by the A. C. Nielsen Co., an independent marketing research firm, for the White Cap Co., a subsidiary of Continental Can Co., Inc., Chicago.

Homemakers, in the Nielsen sampling, were supplied with three containers of catsup. Each bottle was identical, but one had the new twist-off cap, one the pry-off cap and the third, the screw cap. Test homes were given 10 days to use the three packages, then personal interviews were conducted. Nielsen reported that "89% of (catsup-using) housewives preferred the new twist-off cap, all things considered."

Eighty-two per cent preferred it for best general appearance, 90% claimed it was easiest to open and 88% said it was easiest to re-open, 89% stated the new twist-off cap was easiest to re-cap, 87% preferred it for inside appearance after repeated use of catsup and 99% completely resealed the bottle in reusing, which helps retain freshness.

Chicago 7, Illinois
TAylor 9-5400

## For cleaner collapsible tubes
# ALCOA'S TURKISH BATH

Alcoa® Aluminum Collapsible Tubes get a scalding detergent bath after manufacture. This insures the extra cleanliness required by many sensitive products. The hot bath eliminates minute foreign particles and residual oil traces which are normal in most collapsible tube extrusion operations.

If you manufacture a pharmaceutical, a dentifrice, a food product or any of the many other items where cleanliness is mandatory, and you require a convenient economic package with real sales appeal, your best bet is the washed-clean Alcoa Tube.

BETTER PACKAGING BY ALCOA COLLAPSIBLE TUBES

*Your Guide to the Best in Aluminum Value*

**Aluminum Company of America**
**1711-D Alcoa Building, Pittsburgh 19, Pa.**

*We are interested in packaging_____ in Alcoa Tubes. Please have an Alcoa salesman contact us.*

Name_____

Firm_____

Street Address_____

City and State_____

MOUNTAINSIDE, NEW JERSEY.

completely resealed the bottle in reusing, which helps retain freshness.



YOUR PRODUCT IN A NIEMAND INDUSTRIES PACKAGE . . .

practical, profitable . . . and attractive

Do you need a tubular package that's durable, economical, easy to fill, handle and store — one that's attractively printed and handsomely styled with decorative papers or your label for effective, eye catching appeal?

You get every one of these features and lots more **all in one package** — if it's a Niemand Industries tubular package.

Manufactured to your exact specifications, Niemand Industries tubular packages come in a wide range of sizes, with many convenient closures of metal, paper or plastic — with shaker or sifter dispensers where needed.

Let us design a sample package for your line of products. There's no obligation, of course — write for detailed literature.

**NIEMAND INDUSTRIES, INC.**

*Manufacturers of Paper Tube Products*

2502 TAYLORSVILLE RD.
STATESVILLE, NORTH CAROLINA

NI

## Retailers on whiskey decanters

Use of whiskey decanters to spike holiday gift sales was endorsed three to one by some 400 retailers in New York State whose marketing and merchandising of alcoholic beverages in last December's holiday season are analyzed in *Beverage Media*, March, 1957.

**Top sellers** during 1956 holiday season in New York package stores: Old Grand Dad, Walker's DeLuxe, Seagram 7 Crown.

Top-selling decanters in the bonded, straight and blended whiskey categories, respectively, were Old Grand Dad, Walker's DeLuxe and Seagram 7 Crown, New York package stores reported.

More decanters were offered for more brands than ever before last December, but many retailers believe "fancy glass" containers should be reserved primarily to promote the more expensive items such as quarts rather than fifths in the "A" blend whiskies, bonds, straights and Canadians, according to the survey.

Pre-wrapped gift packages in fancy paper and colorful ribbons and bows showed more sales appeal to consumers, but packages without ribbons were described as more convenient for the retailer.

Package stores in the New York City area estimated 40.8% of their total December sales were for gift giving and upstate retailers estimated gift sales at 34.8%—probably a new record in gift-giving sales, according to *Beverage Media*.

## Higher-density polyethylene

[*Continued from page 141*]

pressure cookers at pressures up to 10 pounds. It should be noted that at 15 p.s.i.g. (250 deg. F.) the film melted. Therefore, the upper practical sterilization temperature is 240 deg. F.

### Summary

Packaging films made of the higher-density, high-pressure type of polyethylene resins, as exemplified by Spencer's Poly-Eth Hi-D, when compared with films made of conventional high-pressure-type resins, give the following conclusions:

1. *Heat resistance.* Visibly unaffected by boiling water or steam sterilization up to 240 deg. F.

2. *Heat sealing.* Equal to conventional polyethylenes at normal pressures and cycles with slightly higher temperatures.

3. *Printability.* Equal to normal polyethylenes with typical inks, techniques, and printing and treating methods.

4. *Slip characteristics.* Far superior to unlubricated conventional polyethylenes. Equivalent to or better than normal medium-slip materials when in its unlubricated state.

5. *Block.* Does not block. Permits easy bag opening and film rolling.

6. *Stiffness.* Significantly improved stiffness (three or more times stiffer) means easier handling in packaging equipment and suggests possible overwrap applications.

7. *Temperature stability.* Maintains flexibility at minus 70 deg. F. and resists heat deformation up to 240 deg. F.

8. *Clarity.* Compares favorably with the highest-clarity conventional polyethylene films and superior to low-pressure materials.

9. *Gloss.* Has a sparkling, glossy sheen not apparent in conventional films.

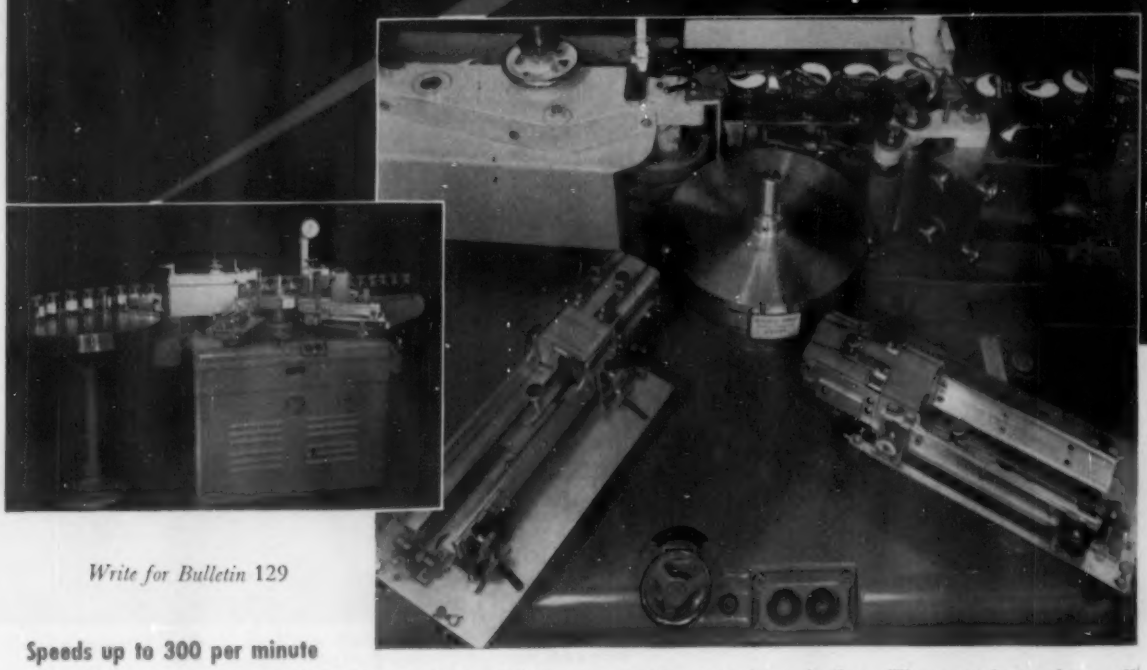
10. *Strength.* Has improved tensile and yield properties and equivalent elongation. Slightly less impact and tear strength than conventional poly-

[*Continued on page 216*]

## *Lightning Labelers*

## DESIGNED FOR TOP SPEED APPLICATION

## *on round containers*



*Write for Bulletin* 129

**Speeds up to 300 per minute**

Operating on an all mechanical, constant motion principle, these machines speed the labeling operation through their simplification of design and their own uniquely direct method of application.

A helical intake feeds and spaces the containers which travel straight through on a platform chain conveyor.

From a vertical gluing roll a uniform film of adhesive is transferred to segments of a glue cylinder. These glue faced segments then "pick off" labels from the reciprocating magazines. The glued labels are directly transferred to the containers by means of a rotating transfer cylinder. The containers then roll between pressure belts and a stationary pad which properly "wipes" down each label.

Straight through without stop or pause — that's the answer to the Lightning Labeler's (1 and 2) smooth, uninterrupted delivery of containers with accurately registered, smoothly adhered labels. If your container is round, the Lightning's a machine you should look at, by all means!

PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Massachusetts. *Also: New York; Chicago; Dallas; San Francisco; Los Angeles; Seattle; Leeds, England. Canadian Division: Delamere & Williams Company, Ltd., Toronto.*

★PNEUMATIC *Packaging and Bottling Equipment*

4. *Slip characteristics.* Far supe-

[*Continued on page 216*]

Certified 8 hour run including make ready was 36 rolls of MST-52 cellophane in 26½" width. Photo shows part of job after slitting and partial shipment.

# CELLOPHANE PRINTED

# *500 feet per minute...all day!*

## *World's fastest way to make good impressions is with a Kidder Filmprinter*

### Fastest on Cellophane

The Kidder Filmprinter turns out top quality multi-color cellophane wraps at a *sustained* speed of 500 feet and better per minute. *There's nothing can touch it!*

Remember this, too. The film is printed, spliced and slit in continuous operation at full speed and then goes directly to a secondary operation or customer's plant.

Standard features of the Kidder Filmprinter:—

• WEB SPLICING AT REGULAR OPERATING SPEEDS • ELECTRONIC TENSION CONTROL • POSITIVE INFEED • HYDRAULIC PLATE CYLINDER HOLD-DOWN RELEASE • CONSTANT-RUNNING SPLASH-PROOF FOUNTAINS • MOTORIZED REMOTE REGISTER CONTROL • COMPLETE DRYING SYSTEM (INCLUDES BETWEEN-COLORS) AND WEB TEMPERATURE PYROMETERS • SCAN-A-WEB VIEWING DEVICE • SIDE GUIDE CONTROL • SLITTING ON THE PRESS • RUNS EQUALLY WELL ON POLYETHYLENE AND CELLOPHANE.

Certified 8 hour multi-color — including metallic gold — production of 1¼ mil polyethylene sheeting, was 30 full rolls slit on the press to yield 60 rolls of stock ready for the bag machine.

# POLYETHYLENE PRINTED

# *400 feet per minute... all day!*

## Fastest on Polyethylene

Here's the Kidder answer to flexible printing that's at its best *all the time.*

Now high speed, high sustained production rate and high quality on both cellophane and polyethylene are all tied together in a single filmprinter. Actually you can't afford *not* to know more about the modern Kidder Filmprinter.

For more information write Kidder Press Company, Inc., Dover, N. H. or Kidder Press Company, Inc., Empire State Bldg., 350 Fifth Avenue, New York 1, N. Y. *West Coast Representative:* Bojanower Machinery Service Corporation, 5270 East Washington Boulevard, Los Angeles 22, Calif.

Make good impressions faster with

*Kidder*

FILMPRINTERS

Standard features of the Kidder Filmprinter:—

POLYETHYLENE AND CELLOPHANE.




# If you package foods, Patapar® can be good news for you!

Available in many different types, Patapar Vegetable Parchment offers unique qualities as a packaging material. It has high wet-strength plus high resistance to grease, fats and oils. Made from pure cellulose, Patapar is odorless and completely non-toxic. It handles easily on all types of packaging equipment.

It meets every requirement of the Federal Food and Drug Act.

## Furnished plain or exquisitely printed

Patapar comes to you plain or beautifully printed by letterpress or lithography. We will reproduce your present design or create a colorful new one for you.

## Send for samples

Write us on your company letterhead, telling your requirements.

Patapar®
Vegetable Parchment
HI-WET-STRENGTH · GREASE-RESISTING

OTHER PATERSON PRODUCTS
*PAYAX waxed paper
*DURAPAX parchmentized cellulose
*PATERSON absorbent paper
*PARCHKOTE art parchment

PATERSON PARCHMENT PAPER COMPANY
Bristol, Pennsylvania
Sales Offices: New York, Chicago
West Coast Plant: Sunnyvale, California

HEADQUARTERS FOR VEGETABLE PARCHMENT SINCE 1885


[*Continued from page 212*]

ethylene, but is superior to low-pressure polyethylenes in this regard.

11. *Permeability.* Is more than twice as impermeable to gases and water vapor as conventional polyethylenes.

12. *Greaseproofness.* More than three times better.

13. *Processability.* Excellent. Requires roughly 25 deg. F. higher extrusion-stock temperature than standard film materials. Is processable on conventional equipment; is being produced commercially now. Both tubular and flat film can be made in thicknesses of less than one mil.

## New heat and eat

[*Continued from page 95*]

also supplies the electrodes and packets of mustard. It imprints the packer's own trade name on the standard Vend-a-Frank carton and also may identify the packer's hot-dog brand on the machine. The carton is of lock-tab, glueless style with top tuck flaps. Its only special feature is the die cutting of slits on the bottom through which the electrodes enter.

These packaging and product controls mean that the vending operator is handling packages rather than food itself. This fact, of course, is important to the vending industry, as it answers the great demand for hot sandwiches without the problems of their preparation. The Vend-a-Frank promoters claim that the operator will realize up to 52% profit on the average sale.

The manufacturer also feels that his machine will continue to have the success it has experienced in pilot operations because drawbacks of similar machines previously attempted have now been eliminated.

Including a condiment with the packaged hot dog is an important addition to merchandising appeal. The single-serve unit of French's cream salad brand mustard or Gulden's is filled by a contract packager in a pouch made of 300 cellophane extrusion coated with 1½ mils of polyethylene, the polyethylene being on the inside. The pouch has a dispensing spout formed in the top seal area which is easily opened by continuing the

[*Continued on page 220*]

# TRI-SURE THE WORLD OVER

Tri-Sure plant at Niles, O.

# New *Tri-Sure*® plant at Niles, O.

## *meets increasing demand for "the best in pail closures"*

This new plant at Niles, Ohio, the most modern of its kind, was built to meet the increasing demand by shippers all over the country, as well as many foreign countries, for the extensive line of Tri-Sure* Pail Closures.

At this plant, the most advanced closures for light containers are developed and manufactured. Among these are the Tri-Sure Reversible Spout Assembly, with spout protected inside the pail; the Tri-Sure Tru-Pour Assembly, featuring a collapsible spout; the widely used Tri-Sure KT or Utility Can Closures, which feature easy pouring, filling and re-use; and many other unique fittings that help the pail shipper do a better job of *packaging* and *selling*.

Strategically located to play its role in "Tri-Sure the World Over," the Niles plant joins Tri-Sure's nine other plants, offices and affiliates in providing the finest in pail closures as well as drum closures to the oil and chemical industries.

Tri-Sure Utility Can Closure
Tri-Sure Reversible Spout Assembly
Tri-Sure Push-Pull Spout Assembly
Tri-Sure Threaded Spout Assembly
Tri-Sure Tru-Pour Collapsible Spout Assembly

*The "Tri-Sure" Trademark is a mark of reliability backed by over 35 years serving industry.

Always specify **Tri-Sure** CLOSURES

**AMERICAN FLANGE & MANUFACTURING CO. INC., 30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.**
**CHICAGO, ILL. · LINDEN, N. J. · NILES, OHIO**

Tri-Sure Products Limited, St. Catharines, Ontario, Canada
Tri-Sure S/A Indústria e Comércio, Sao Paulo, Brazil
American Flange & Manufacturing Co. Inc., Villawood, N. S. W., Australia
Companio Mexicana Tri-Sure S/A, Avenida No. 1 y Piramide, Naucalpan, E. de Mexico, Mexico
B. Van Leer N. V., Stadhouderskade 6, Amsterdam, Holland
Van Leer Industries, Ltd., Seymour House, 17 Waterloo Place, Pall Mall S. W. I, London, England

[Continued on page 220]

**New wonder adhesives—A long-needed answer to these annoying costly sealing problems—and many more.**

*Poor bonding to impervious surfaces • excessive foaming in glue pot • excessive glue pot build-up • too critical a film thickness • extreme stringing • rate of set too fast or too slow • insufficient or excessive penetration • improper tack range • poor water resistance • short shelf life • unsightly squeeze-out • blistering • poor bond stability • unpleasant glue line odor • mold development • arduous glue pot clean up • short pot life • lack of, or too much pliability.*

Seban is an extraordinary new line of polyvinyl resin adhesives. Though new on the market, it is not new in performance—for Seban has long been in test stages. It has been used on machinery you use yourself. It has been applied under actual packaging conditions similar to your own. It has been tested under the most severe circumstances likely to be encountered in day-to-day plant operations. And in every case—Seban did a superior sealing job!

Every one of the many grades of new Seban can be modified to meet any known specific requirement. Here's the adhesive you've been waiting for. Send the coupon today for further information.

**Don't send for samples of SEBAN!** Armour is not offering samples of SEBAN. Because, like any specialists you call on, Armour can't prescribe until we know your problems. However, once we know your needs we can recommend a grade of SEBAN for the job.

ARMOUR *Adhesive Division*

**Armour and Company** • 1355 West 31st Street • Chicago 9, Ill.
Delaware and Spring Garden Streets • Philadelphia 23, Pa.
66 Locust Street • South Boston, Massachusetts
120 Broadway • New York 5, New York
2501 83rd Street • North Bergen, New Jersey
235 South Hamilton Street • High Point, North Carolina

**MAIL COUPON FOR FURTHER INFORMATION!**

**Armour Adhesive Division**
**1355 West 31st Street • Chicago 9, Illinois** M4

☐ Send me additional information and technical bulletins on SEBAN.

☐ Have an Armour SEBAN representative call on me.

NAME _____ TITLE _____

FIRM _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

*from match books to wallpaper . . .*
*from tea bags to tabulating cards . . .*

**Vitra-Tone**

**STEEL ENGRAVED CYLINDERS**

***Print Best! . . . . Last Longest!***

More and more packaging men are discovering that Steel Engraved Cylinders give them the printed package they are looking for. Converters are impressed with the way they out-last all other printing techniques and the fact that every impression is as perfect as the first—even after 3 or 4 years of continuous use! Moreover when printing critical materials you can be confident of perfect results with chromeplated steel.

★ Greater Print Clarity For More Perfect Packages
★ Faultless Color Registration at Speeds Up To 800 impressions Per Minute
★ Chrome Plated Steel Cylinders In Any Size Up To 36" Long
★ Patterned Glue Rollers That Assure Stronger Grip

*Make your next impression a permanent one—make it a steel engraved cylinder by Vitra-Tone. Write today for prices and details.*

[*Continued from page 216*]
pre-cut tear slit from one corner.

The packaged *hot* hot dog appears to have a good future. It has sold well in every season of the year in test-market operations and is a natural adjunct to soft-drink, ice-cream and hot-coffee vending machines. The machine has been installed in railroad terminals, factories, offices, hospitals, military installations, schools, theatres, gas stations skating rinks and bowling alleys.

Widespread availability of the dog-in-a-carton will be of great interest to meat packers, for it could easily push hot-dog consumption well above the already-staggering figure of 10 billion a year. That figures out to more than 57 hot dogs for every man, woman and child in the country last year and industry predicts that the figure will go well over 60 this year.

In the over-all vending field—expected to hit $2 billion in product sales by the end of 1957—packaging will play an increasingly important part. The trend toward full-line feeding installations and the tendency for a combination of hot and chilled foods and beverages to accelerate companion sales will call for more and better packages adaptable to machine vending and heating techniques such as this one.

## Lithography prizes

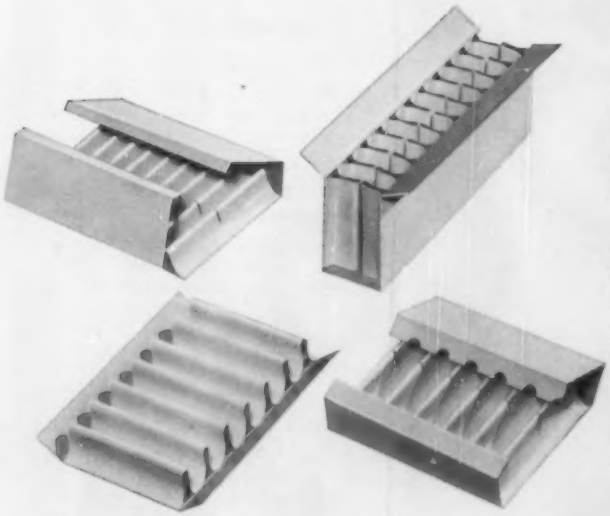
From a record total of 2,496 entries, 270 pieces of outstanding lithography were selected for prizes in the 7th Annual Lithographic Awards Competition & Exhibit sponsored by the Lithographers National Assn., Inc., New York.

The winners will be exhibited April 30 to May 3 at the Madison Hotel, New York; May 14 to 17 at the St. Clair Hotel, Chicago, and also at locally sponsored exhibitions in many major cities.

Entries were judged on a basis of excellence of lithography, originality and freshness of art and design, and functional value.

Included in the 45 categories was point-of-purchase material such as flat- and multi-plane window displays, light or motion displays, counter and floor merchandiser displays, combination displays and miscellaneous specialty displays. Of

## RONDO . . . protects small and delicate objects in a unique manner



The spring-clip action of the fluted partitions, firmly, yet gently "pocket" the inserted items while they are being transported and handled.

Many styles in different sizes have been developed, giving a snug and protective grip to a large variety of products.

The picture shows a simple tray with open Rondo partitions for holding any kind of cylindrical or rectangular item, such as medical ampuls, electronic tubes and components, color tubes and crayons, etc.; a tray with parallel Rondo-lated flutes for holding watch cases and cosmetic articles, etc.; a Rondo tray with a slot and die-cut shoulder lock for special security; and, a Rondo tray with a topclosure, forming an economical, one-piece unit.

More examples are depicted in the Rondo brochure, which will be sent upon request.

**RONDO**

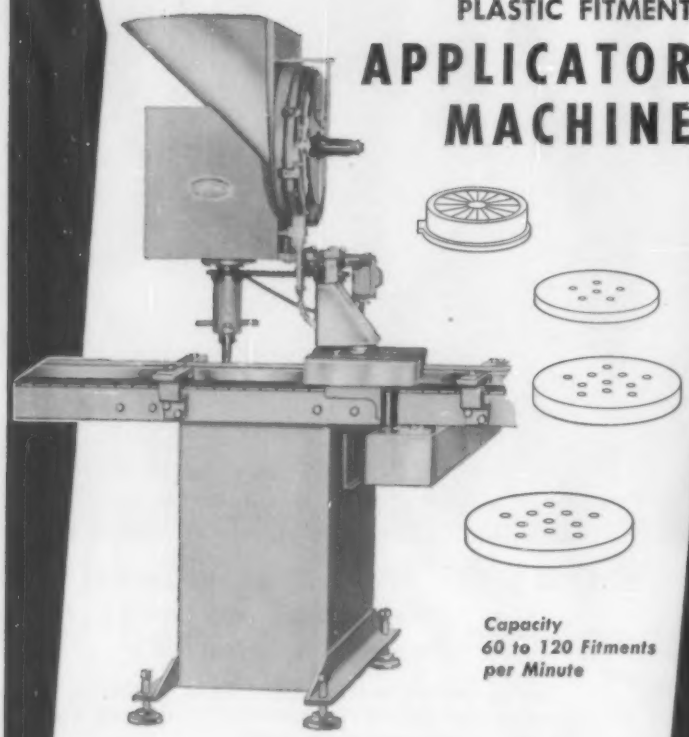
AMERICAN RONDO CORPORATION
HAMDEN 14 CONN

Tops them all

• A MODEL FOR EVERY PURPOSE
• A SPEED FOR EVERY NEED

RESINA
CAPPERS

PLASTIC FITMENT
APPLICATOR
MACHINE



*Capacity*
*60 to 120 Fitments*
*per Minute*

Operates with or without Screw Capper. Selects and applies varied sizes . . . also solid type fitments conventional in drug and pharmaceutical packaging. Remarkably simple and efficient to operate . . . at low, LOW maintenance cost.

AND SPECIAL MACHINERY
Descriptive Literature on Request

RESINA
AUTOMATIC MACHINERY CO., INC.
572 Smith Street Brooklyn 31, N. Y.
*Agents in Principal Cities throughout United States and Canada.*

special interest were the winners in the packaging field.

*Labels*—Gaco Neoprene, Gates Engineering Co., by Diamond Printing Co.; Red Owl Brand can, Red Owl Stores, Inc., by The U.S. Printing & Lithograph Co.; Blue Goose, Washington Canners, by H. S. Crocker Co., Inc.; Refried Beans, Listo Food Products, by Western Lithograph Co.; Libby Pineapple Juice, Libby, McNeill & Libby, by Honolulu Lithograph Co., Ltd.; Carnival, Roundy's, Inc., by Stecher-Traung Lithograph Corp.

*Wrappers*—Cameo box, Burlington Hosiery Co., by Kaumagraph Co.; Kitchen ensemble, Barth & Dreyfuss, by H. S. Crocker Co., Inc.; Emerson Cigar box, D W G Cigar Corp., by Consolidated Lithographing Corp.; Petit Fours, The Epicures' Club, by R. R. Heywood Co., Inc.; Realistic Wax Fruit, Louis Marchi Co., by Rossotti Lithograph Corp.; Town and Country box, Robert A. Johnston Co., by Philipp Lithographing Co.; Dock Scene, Revell, Inc., by Western Lithograph Co.,; Four Roses blended whiskey and gin, Four Roses Distilling Co., by The Lord Baltimore Press, Inc.; Melba Toast Rounds carton, O. Gauthier, Ltd., by Lawson Lithograph & Folding Box Co.; Early Times liquor, Brown-Forman Distilleries, by Milprint, Inc.; Van Camp's Tenderoni Stokely-Van Camp, Inc., by The U.S. Printing & Lithograph Co.; Dream Whip carton, General Foods Co., by The U.S. Printing & Lithograph Co.

*Miscellaneous Packaging Material*—Dixieland From the Deep North, Zephyr Productions, Inc., by Standard Lithograph Co.; Pearl Bailey Sings, Mercury Records, by Photopress, Inc.; Royal Rivera Pears, Bear Creek Orchards, by H. S. Crocker Co., Inc.; Bizet-Schubert, Vox Productions, Inc., by The Baughman Co.; My Fair Lady, Masterseal Records, by W. S. Konecky Associates; The Touch, Bally Recording Corp., by Photopress, Inc.

CORRECTION: Indianapolis, Ind., is the location of Basca Mfg. Co., producers of "Ribfoil cups" for Kraft Party Snacks, which received the Aluminum Co. of America Award in the Package Designers Council Competition—*not* Minneapolis as erroneously stated in our April issue, p. 87.

# TRY FOIL KRAFT!

THEY'RE THE LARGEST SUPPLIER
OF RIGID FOIL CONTAINERS
TO THE FROZEN FOOD INDUSTRY

How did Foil Kraft get that way? Simply by taking pains to make every customer a satisfied customer—from frozen food's largest processors, right on down.

**And that means Service.**

The sort of service you can count on for fast deliveries or prompt attention to particular requests. The kind of convenience you expect in being able to choose from a complete line of top-quality rigid foil containers. The type of emphasis to your individual design problems that spells extra sales, added economies.

To serve you better, Kaiser Aluminum now has two Foil Kraft plants in full production. One is in Los Angeles, the other (just completed) in Wanatah, Indiana. Write now for our full-line catalog.

***See "THE KAISER ALUMINUM HOUR." Alternate Tuesdays, NBC Network. Consult your local TV listing.***

## Kaiser Aluminum

**FOIL KRAFT DIVISION**

GENERAL SALES OFFICE

CHICAGO — 919 N. Michigan Ave. ..... MOhawk 4-6900

SALES OFFICES

OAKLAND — 1924 Broadway ..... TWinoaks 3-4600
LOS ANGELES — 900 Wilshire Blvd. ..... Madison 6-4801
NEW YORK — 300 Park Ave. ..... Plaza 9-4100
BOSTON — Statler Office Bldg. ..... Hancock 6-7255

PLANTS ..... WANATAH, INDIANA and LOS ANGELES, CALIFORNIA

OR CALL YOUR NEAREST KAISER ALUMINUM SALES OFFICE

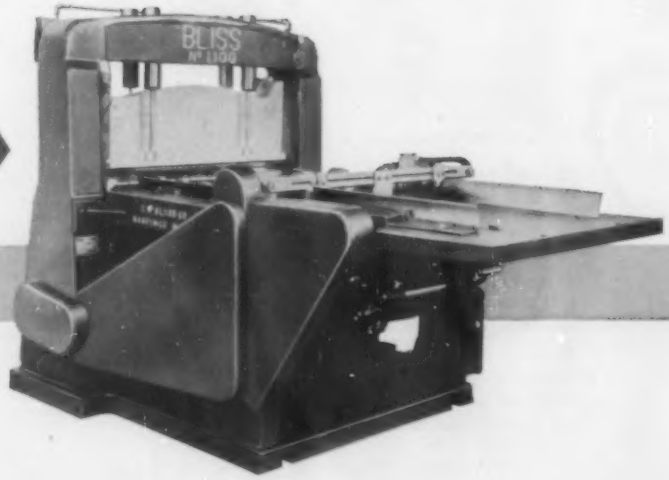
for can bodies...

BLISS BODYMAKER NO. 403—forms 400-500 #202 to #404 sanitary bodies per minute. Easily set up and adjusted.

# Six newly-designed key machines for high-speed can lines

***Their 400-500 per minute speeds, their adaptability to various sizes, gives you greater production at less cost***

SCROLL SHEAR NO. 1100—blanks scroll cut strip from 36x36" sheet at 125 spm.




for can ends and closures...

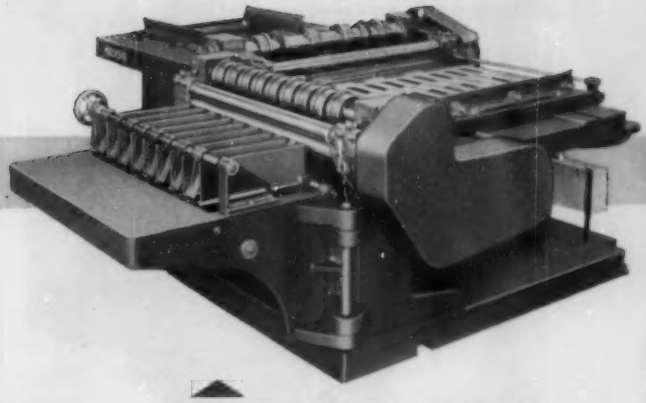
BLISS SINCE 1857

*A Century of Making Metals Work for Mankind*

**E. W. BLISS COMPANY, Canton, Ohio**

PRESSES • ROLLING MILLS • MILL ROLLS • DIE SETS • CAN MAKING MACHINERY

**DOUBLE END FLANGER NO. 1315**—flanges 500 or more per minute: diameters from 2 to 4-3/16"; heights, 2 to 8".



**DUPLEX TRIMMER AND SLITTER NO. 5225**—trims and slits, or slits bodyblanks from 36x36" sheets. Speed: 30-75 per minute.

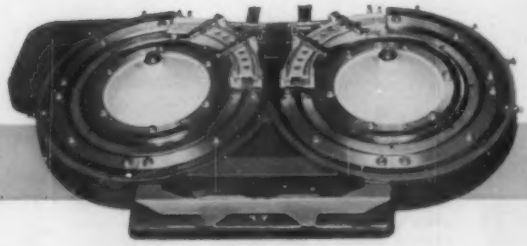
Every day more Bliss can machinery appears in leading can making plants. Reports show that they prove themselves in many ways.

They produce more cans with far less downtime. They are easily set up, readily adapted to changing requirements. And they are dependable, running shift-after-shift, day-after-day with little need of maintenance.

It makes sense then to call Bliss—whether you need one machine or whole new line. Why not give your nearest Bliss Field Engineer a call, or write to E. W. Bliss Company, Canton, Ohio.

## Complete catalog available on any machine shown here.

1. Slitters, scroll shear
2. Strip feed presses, curlers, stackers
3. Bodymakers, power formers, horn and seaming presses
4. Flangers, beaders, thread rollers
5. Double seamers, side seamer
6. Testers

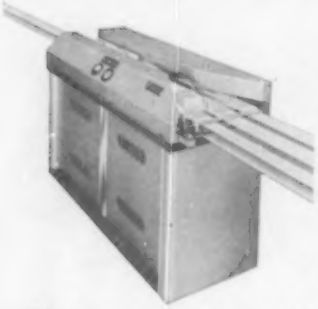


**DOUBLE CURLER NO. 20**—Curls ends from 2 to 4¼" in diameter. Stackers, conveyor belt intakes available.

**STRIP FEED PRESS NO. 1831**—blanks and forms can ends and closures at 325 spm. Diameters: from 1-15/16 to 8".

**are profits dribbling through your fingers due to inefficient package weighing?**

# SELECTROL weighs, sorts, and counts every package



Checkweighs every package right in your production line. Eliminates deliberate overfill to insure full weight.

SELECTOR weighs in motion without spillage or interruption to production flow. Out-of-tolerance units are smoothly diverted to over and under weight channels, correct weight packages continue on without further handling.

Constant checkweighing with SELECTROL, in contrast to occasional spot checking, provides more accurate control of processing and filling operations. Eliminates product waste and decreases manual labor required to make corrections.

*Sales and Service Coast to Coast*

**Exact Weight Scales**

*Better quality control*
*Better cost control*

THE EXACT WEIGHT SCALE COMPANY

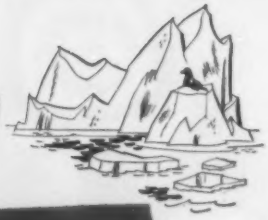
914 W. Fifth Avenue, Columbus 8, Ohio

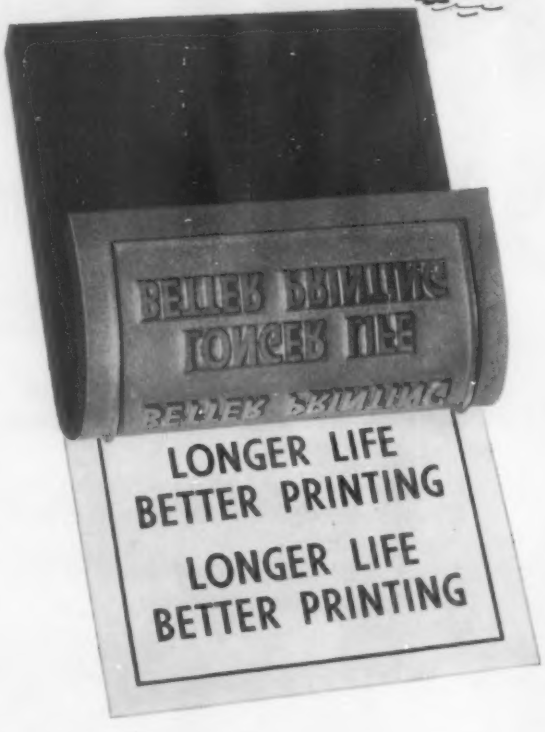
In Canada: P.O. Box 179, Station S, Toronto 18, Ont.

US RUBBER PRINTING PLATE MATERIALS

# Finest Printing Results with "U.S." Unvulcanized Rubber

**thanks to "U.S." TO YOU Refrigeration**






The special refrigeration practices of U. S. Rubber provide "portal-to-portal" assurance against premature "setting up"... guarantee quality control of "U. S." unvulcanized rubber from calender to customer... mean that when you buy "U. S." you buy the best.

**For quick and complete service on your rubber plate problems, contact Williamson & Co. who carry a complete stock of U. S. Rubber printing plate materials at these convenient warehouses:**

**CALDWELL, N. J. • BRYAN, OHIO • SAN MATEO, CALIF. • GRIMSBY, ONT.**

**...or contact us direct at Providence, R. I.**

US RUBBER **Mechanical Goods Division**
**United States Rubber**

## Potato-chip winners

Point-of-sale appeal to women shoppers was the criterion for judging 285 potato-chip bags entered in the Glassine & Greaseproof Mfrs. Assn. competition. Winner in the rotogravure-printed field was Mead's Fine Bread Co.'s package, designed and converted by Milprint, Inc., Milwaukee, Wis. Top award in the flexographic group went to Crispie Potato Chip Co. for its four-color bag designed by Walter Landor & Associates, San Francisco, and converted by Milprint. Flexographic entries also won second and third place awards—Clover Foods Co.'s bag designed and converted by Western Waxide Div. of Crown Zellerbach Corp., San Leandro, Calif., and a bag designed for American Stores Co. by Frito Tri-State Corp., Philadelphia, Pa., and converted by C. E. Stevens Bros., Inc., Baltimore, Md. Judges were Lawrence Drake, editor, Grocery Edition, *Chain Store Age;* Harvey F. Noss, executive vice president, National Potato Chip Institute, and Richard G. Zimmerman, publisher, *Super Market Merchandising.*

## Meat labeling

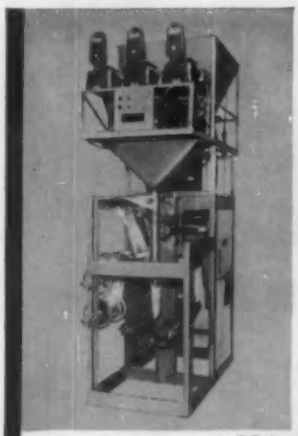
[*Continued from page 124*]

operator has merely to remove the package from the scale and apply it to the ejector—and in one simple operation the label is attached to the package.

Some stores (notably the A & P chain, which is also using this system in some of its outlets) wrap the labels inside the package, using an ejector which turns the label over and delivers it face up on the commodity to be wrapped. This unit also holds the label until the operator releases it through a trigger mechanism conveniently operated by the package. Commodity printing inserts in a suitable rack, usually located above the labeler, are easily selected and inserted for printing the names of the commodities.

Installation of this system at Kings Super Market enables the store to mechanize meat pre-packaging, generally considered essentially a hand operation. This mechanization, plus the superior packaging materials used by Kings, enables the store to compete profitably for the consumer's meat dollar.

America's most versatile blister packaging specialists
BLISTER PACKAGES...
TRANSPARENT PLASTIC CONTAINERS
FOR BETTER SALES
Your product will be singled out at the point of purchase through our custom-made creative packaging . . . Blister packaging in all forms, beaded transparent boxes (quonset and rectangular), acetate boxes (rectangular, round and oval), tubes, and sleeves
• Thermoforming • Plastic partitions and platforms
• Industrial parts • Toy components
We invite your inquiries on your packaging problems
Plastofilm INCORPORATED
916 WEST UNION AVENUE P. O. BOX 595 WHEATON, ILLINOIS
REPRESENTATIVES: CHICAGO, CLEVELAND, DETROIT, NEW YORK, TACOMA



3 Machines in ONE!
VERTI-PAK
forms . fills . . . seals . . bags
AT LOWEST COST!

The lowest priced 3-in-1 packaging machine by far—pays for itself in 1 year or less! Easy to set up, simple to operate, Verti-Pak reduces handling costs, eliminates waste, speeds packaging. Now in use in many leading plants, VERTI-PAK is a profitable investment for the small, as well as large plant!

30 to 50 COMPLETE PACKAGES PER MINUTE!

Verti-Pak is available with auger, volumetric, turret, conveyor and piston feeds and with exact weight scales for packaging almost any product—food products, candy, nuts, dry goods, hardware, toys, plastics, drugs, etc., etc.

Complete Line of Heat Sealing Equipment
Write for Information

CAN BE USED WITH POLYETHYLENE or with CELLOPHANE AND POLY-CEL!

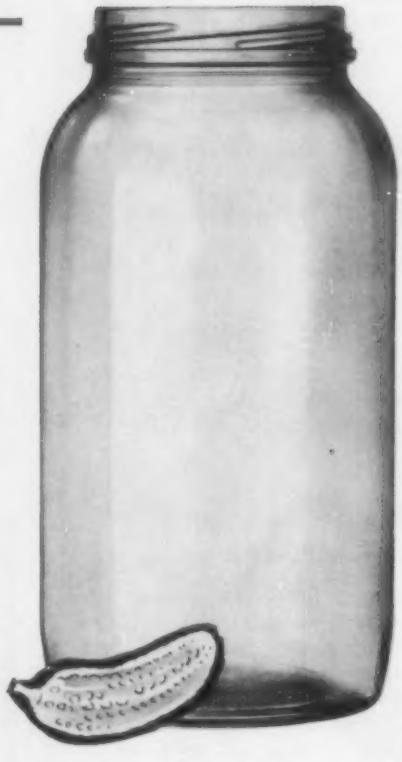
MERCURY
HEAT SEALING EQUIPMENT CO.
N.E. COR. HOWARD & HUNTINGDON STS.
PHILADELPHIA 33, PENNSYLVANIA

**IMPACT!** adds sales punch!

**IMPULSE!** sparks point-of-purchase buying!

**IMPROVEMENT!** brings you the newest in glass!

## The Hazel-Atlas "Imps" say—



# goobers, farms, and dills—

# ...sell better

*A* Whether you pack the produce of peanut plantations, orchards and farms, or bees and cows, the efforts of the three Hazel-Atlas "Imps" will benefit your product. It will get more sales *imp*act and produce more *imp*ulse sales in beautiful H-A packages, because:

**1.** The appetizing color and shape of your foods are "silver-tongued" salesmen, when you let them speak for themselves in a beautiful H-A container. Your vegetables and fruits keep their fresh personality—appetite-arousers seem zestier—preserves more wholesomely sweet—and baby foods purer . . . when their natural beauty sweet-talks from the shelf in a sparkling H-A package.

## sauces, olives, and sweet thrills

# in H-A glass packages

**2.** Beautiful H-A Decorated Tumblers give your product two selling lives, *first* selling your food with sparkling design and color from the shelf, continuing to sell in the consumer's home as an often-seen re-use container, a constant reminder of your product.

**3.** Rigid quality-controls keep your H-A containers uniform in size, shape, clarity and color. They perform efficiently on the filling line and display your product at its best. You are sure of fast, dependable delivery during sales peaks and emergencies, served by H-A's nationwide network of glass plants and warehouses. For details, call your H-A representative today.

*...glamour in glass!*

## HAZEL-ATLAS GLASS

division of CONTINENTAL CAN COMPANY

WHEELING, WEST VIRGINIA

# Classified Advertisements

Employment
Business Opportunities
Used or Resale Equipment

## Machinery and Equipment For Sale

**FOR SALE:** Stokes and Smith Two Station, Tandem Filling Machine, Model HG-85. Machine is in excellent condition; had very few operating hours due to change in products. Fully equipped with explosion proof motors, pumps, etc. Excellent for packaging dry, powdery products, interchangeable sizes. Hayssen Carton Style Wrapper, Model 39-S, complete with polyethylene attachment, motor, variable speed drive. This machine will wrap with polyethylene as well as pliofilm, cellophane and heat-sealable papers. Reply Box 634 Modern Packaging.

**FOR SALE:** (2) Model "A" Transwraps, Auger Feed makes 2¾" width finish seal bag used 4 months. (1) New Way Model V-4 Labeler—used 6 months. (1) Triangle Automatic Filler for Powders, Granules. Breaker Confections, Inc., 3005 W. Carroll Avenue, Chicago, Illinois.

**FOR SALE:** Four Roto P O 2 Polyethylene Bag Machines fitted with variable speed main drive Electric eye register control, Roto Bag Computing Stacker. Two of these machines with web guider—$5,000.00 each. Reply Box No. 637 Modern Packaging.

**FOR SALE:** 20 head Pneumatic Samco straight line filling machine. Serial #12680. Class #7142. Pneumatic 5" duplex front labeler, handles 2½ oz. to 14 oz. round bottles. Speed 120 per M. Serial #12682. Jones Constant Motion Cartoner w/circular attachment S-541 Serial #1869; parts for 2½ oz. and 6 oz. round bottles. Package Machinery Co. Bundle Wrap Machine Serial #18265. Wraps 1 dozen 2½ oz. bottles or ½ dozen 6 oz. bottles in individual cartons. Two (2) H.S. Porter Pony Mixers with U.S. Syncrogear Motors 2 h.p. 3 phase 220/440 volt handles 27½" dia. tubs. Num 31 Day Company Roball Sifter. Reply to Lehn & Fink Products Corporation, Lincoln, Illinois, Attention Purchasing Department.

**FOR SALE—PAPER CAN MACHINERY.** Knowlton 14 and 16 inch Convolute winders. Knowlton and Langston heavy duty spiral winders. Standard Knapp wrap around labelers. Bliss 15 and 16B seamers. Bliss and Angelus automatic seamers for rounds. Max Ams 168C seamers with adjustable heads. McDonald 31E presses. Angelus Oblong automatic seamers. Leffler Bliss and Max Ams OB1 presses. Max Ams Dial presses. Cameron 60 inch score cut paper slitter. Bliss Carton Stitchers. Complete Engineering and Tooling for round or oblong paper cans, spiral tubes and convolute tubing. Convolute Fire Cracker tube machinery. Complete engineering and tooling for Government shell containers. Knowlton and Langston recutters. Asphalt Equipment for Government containers. Above for sale or lease. M. C. Riccardi Co., Phone Philipsburg 5-9431, P. O. Box 442, Alpha, New Jersey.

**WORLD'S LARGEST STOCK OF WRAPPERS**—Rebuilt and guaranteed. At great saving. All types and sizes of wrapping machines now available for immediate delivery. Pneumatic Scale late style Packaging Unit with Automatic Feeder, Bottom Sealer, Filler, Top Sealer and all interconnecting conveyors. For giant size box. Package Machinery Co. FA, FA2, FA3 and FA4 Wrappers, with and without Electric Eye. Hayssen adjustable Wrappers—3"-7", 5"-11", 7"-13", 7"-17", 9"-19", 12"-24", 15"-25". With and without Electric Eye. For cellophane or wax paper. Heat seal or glue seal. Hudson Sharp Campbell Models 2W6, 2W8 and 2W10 Cellophane Wrappers. Jones Automatic Carton Forming and Filling Machine. Standard Knapp 429 Automatic Carton Sealer. Tell Us your Requirements. Write, Wire, Phone Collect. Union Standard Equipment Company, 318-322 Lafayette Street, New York 12, N.Y.

**FOR SALE**—Two Holweg C.P.2 Cellophane Bag Machine in excellent condition, complete with dual unwind stand. Reliance adjustable speed main drive and Electric eye register control. $10,000.00 each. Reply Box 636 Modern Packaging.

**STANDARD-KNAPP LABELLER:** Heavy duty wrap around. Standard speed 150 units per minute. Size range 4¼" to 2½" Diameter, 7½" to 1¾" height. ¾ HP 110/220V motor, 110 volt heater. Inspect anytime. Phone T.A.G. Closter 5-1500 or write U.S. Bronze, Closter, N.J.

## Machinery and Equipment Wanted

**CAPEM SEALING MACHINES**—Two, four or six head rotary type Capem Sealing Machines. Specify what cap sizes each machine will handle, model and serial numbers, condition and price. Reply Box 635, Modern Packaging.

## Help Wanted

**SALES REPRESENTATION:** Manufacturer has openings for sales areas in Minnesota, Northern Ohio and Eastern Pennsylvania. Net and gross weighers, volumetrics, fillers, elevators for foods, spices, chemicals, etc. Weigh Right Automatic Scale Company.—Joliet, Illinois.

**PACKAGING ENGINEER:** Leading Manufacturer of folding cartons offers unusual opportunity for a man with creative ability in folding carton structural design. Applicant must be familiar with modern packaging methods and techniques. This is excellent chance to become associated with a top-notch organization in New England area who will recognize initiative and pay salary commensurate with your ability. Write giving full particulars and resume of background and experience. Reply Box 633 Modern Packaging.

**WANTED:** Engineer—Estimator Position requires experienced engineer to Engineer and design flexographic printing and paper converting equipment. One man engineering office. Pleasant surroundings, must be flexible. Write personal history and attach snapshot. Reply Box 643 Modern Packaging.

**SALES AND SERVICE ENGINEERS**

Leading manufacturer of packaging equipment needs two sales and service engineers. Must be able to travel, mechanically inclined, and have some knowledge of food processing. Please give complete qualifications and compensation expected in first reply. Box 638, Modern Packaging.

**WANTED PACKAGING MACHINERY** Sales Engineer, Old Established Machinery Manufacturer located middle west needs aggressive sales engineer to work from main office. Must have experience in product packaging field. Excellent chance for growth. Reply Box 632, Modern Packaging.

**SALES AGENTS—MFRS. REPS:** New line of Pressure Sensitive Labels and Roll Die Cut Heat Seal Labels on exclusive basis. Territory and account protection. Wide application for industrial use. Specifications met for all types of automatic wrapping machines. Give outline of present activities, territory, lines, contacts, etc. Reply Box 645, Modern Packaging.

**MANUFACTURER'S REPRESENTATIVE** We manufacture a complete line of packaging machinery for the food, chemical, confectionery and dairy industries. During the past year we have introduced several new machines. The enthusiastic reception given to these new machines, as well as the continuing expansion of our standard line, has caused us to re-examine our present sales territories. Our sales coverage, because of the additional industries we now embrace, is inadequate. We have, therefore, several highly productive areas now available for immediate representation. Please give us full information as to the size of your organization, lines now handled, territory actively covered, and any other data that you feel would be of interest. All replies will be treated in a confidential manner. Triangle Package Machinery Co., 6633-55 West Diversey Avenue, Chicago 35, Illinois.

**SALES REPRESENTATIVES WANTED**
West Coast Converter has sales openings in Los Angeles and San Francisco for direct representative who has background in converted Cellophane, Polyethylene, Foil, Acetate, Flexible lamination, Saran and Pliofilm. This is an excellent opportunity with an established an expanding converter. Liberal drawings against commissions for experienced and qualified men. State your background in detail. Your letter will be completely confidential. Reply to Box 639, Modern Packaging.

**SALESMAN:** Leading New England Folding and Set-up Paper Box manufacturer requires experienced Box Salesman to assist in growth of the Company. Growth—due to new equipment and increased customer service. Excellent opportunity—draw against commission—starting open—very high potential earnings. Submit complete information. Reply Box 640, Modern Packaging.

**ENGINEERS** — Chemical — Industrial — Mechanical Design: Very progressive paper and foil converter has exceptional opportunities for alert and ambitious engineers. Enjoy working in congenial surroundings in the heart of the "Land of 10,000 Lakes." Excellent company benefits. For additional information write giving complete resume of past experience. Reply Box 642, Modern Packaging.

**SALESMAN WANTED:** Position open in our New York office selling Flexible Packaging materials. Important replacement necessary because of early retirement. Excellent opportunity for right man to handle large existing customers and to develop new business. Converter experience desirable but not necessary. Send applications to Nashua Corporation, Nashua, New Hampshire attention K. R. Hines, Jr.

**DESIGN PROJECT ENGINEER** To design and develop mechanisms and machines in the field of plastic films handling, printing and sealing. M.E., 3-5 years experience in this field desirable or strong machine design and project experience with light to medium special purpose industrial machines. Reply Box 641, Modern Packaging.

## Miscellaneous

**TEXAS MFG'S REPRESENTATIVES:** Flexible Packaging. We are established doing large volume with food, produce, candy, industry etc. Expanding, seeking lines packaging materials such as, paper, foil, films, lamination etc. Rigid and flexible closures and containers. Labels, tape, cartons, machinery and others. Reply Box 631, Modern Packaging.

**ALL CLASSIFIED ADVERTISEMENTS PAYABLE IN ADVANCE OF PUBLICATION**
**NEW RATES: EFFECTIVE MARCH ISSUE**
Closing date: 10th of preceding month, e.g., April 10th for May issue.
Per inch (or fraction) ..... $20.00. Per inch (or fraction) boxed ..... 30.00
For purposes of establishing rate, figure approximately 50-55 words per inch.
Address all communications to Classified Advertising Department,
Modern Packaging, 575 Madison Avenue, N. Y. 22, N. Y.
*Modern Packaging reserves the right to accept, reject or censor classified copy.*

It looks like
Expensive
Printed Film

# It's Dennison's amazing new labeling process

# THERIMAGE®

. . . a revolutionary package labeling technique that combines the effect of printing with the versatility and economy of labeling.

The Therimage label is printed on a thin coating on a paper base; it cleanly transfers to the packaging material when heat and pressure are applied.

**Here are the advantages of Therimage**

- √ Easily adapted to your own packaging equipment.
- √ Offers outstanding appearance, better adhesion, less bulk and faster application than conventional labeling processes.
- √ Ideal for short runs.
- √ Labels may be applied to a wide variety of packaging materials.
- √ Solves many inventory problems by providing a means of imprinting variable information on pre-printed wrappers. May eliminate need for pre-printed wrapping material.
- √ Makes it possible to add special sales promotion messages, price and count charges or other information to previously printed film.

**HOW THERIMAGE WORKS**

A Therimage label is applied by means of an Imagraph Machine which was developed by Adolph Gottscho, Inc. It is a compact device designed for easy attachment to any standard wrapping, bundling or bag-making machine.

The entire operation is completely automatic and synchronized to position the label transfer in any desired location on the packaging material, and at standard production speeds. The Imagraph Machine is quickly and easily adjusted to accommodate various cut-off or repeat lengths that are required when a changeover is made from one wrap to another.

*For more information about Therimage, write to* Dennison *Framingham, Massachusetts*

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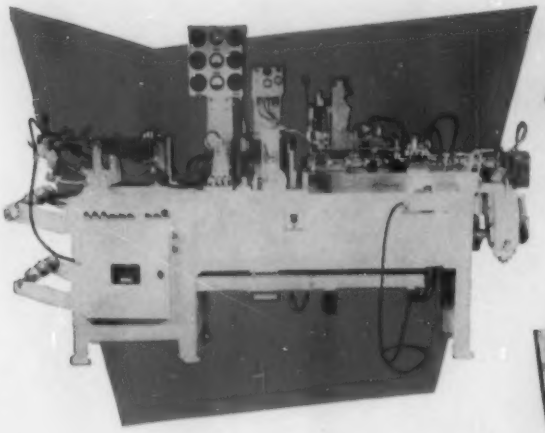

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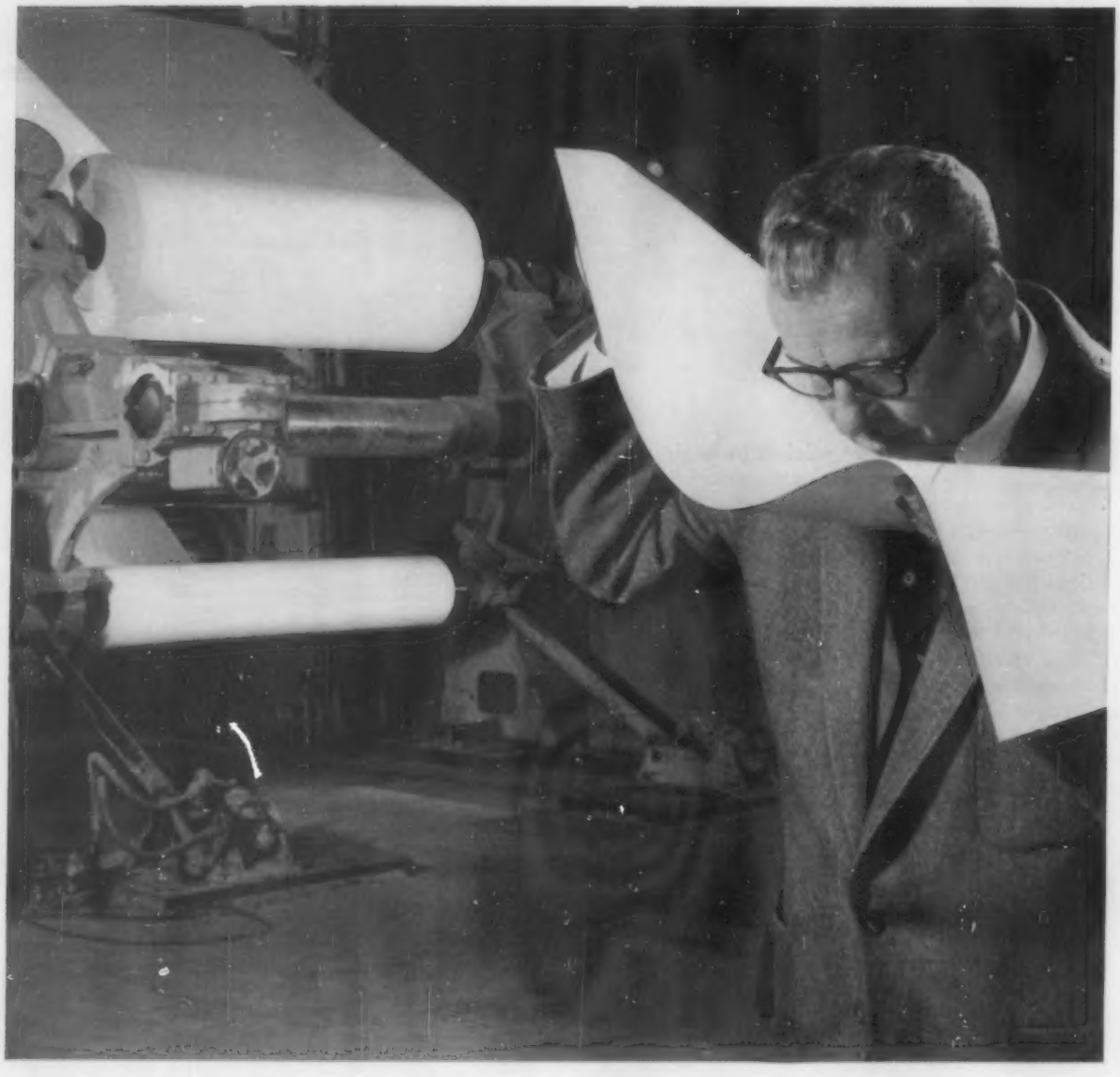

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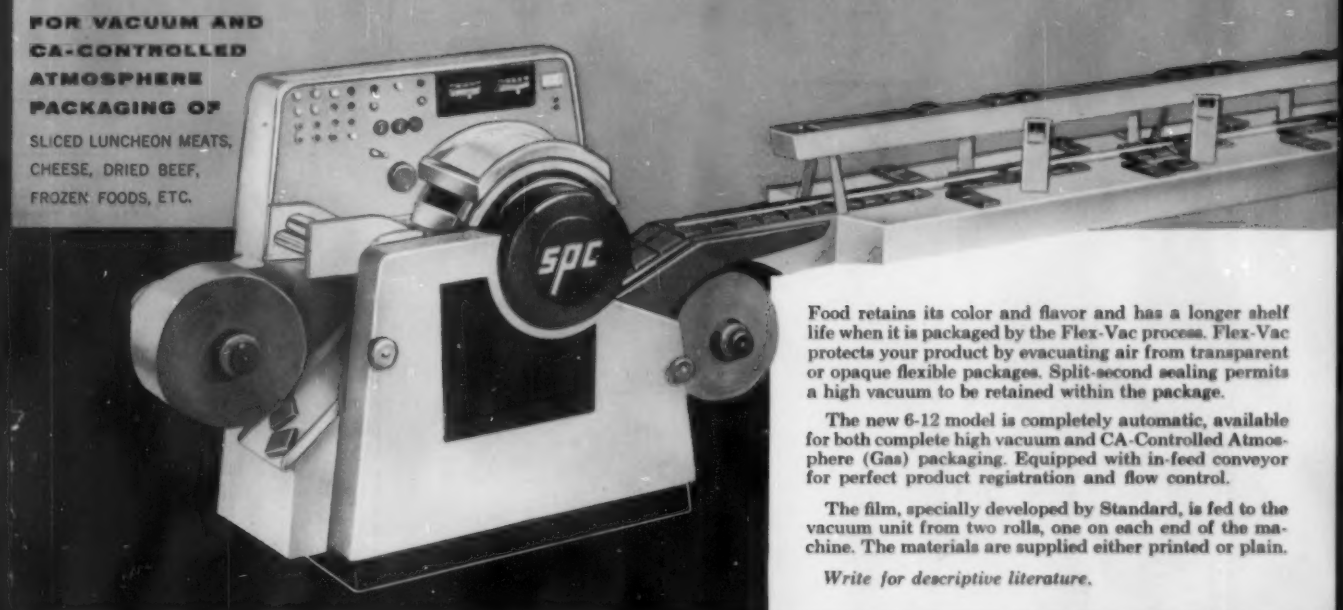


Food retains its color and flavor and has a longer shelf life when it is packaged by the Flex-Vac process. Flex-Vac protects your product by evacuating air from transparent or opaque flexible packages. Split-second sealing permits a high vacuum to be retained within the package.

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- New ⅛" lip eliminates excess materials
- Saves 50% of the film now used in pouches

***This is how the "6-12"***
**SAVES MONEY ON LABOR:**
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- Less down-time

***This is how the "6-12"***
**MAKES MONEY ON PRODUCTION:**
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- Eliminates hand feeding
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***This is how the "6-12"***
**MAKES MONEY ON MERCHANDISING FLEXIBILITY:**
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